6-1-2001

2001-2003 Wright State University Undergraduate Course Catalog

Follow this and additional works at: https://corescholar.libraries.wright.edu/archives_catalogs

Repository Citation

This Catalog is brought to you for free and open access by the Course Catalogs and Descriptions at CORE Scholar. It has been accepted for inclusion in Browse All Course Catalogs by an authorized administrator of CORE Scholar. For more information, please contact library-corescholar@wright.edu.
Important Numbers

All phone numbers in area code 937 unless otherwise noted

General Information
Information Desk
775-5740  E147 Student Union
Telephone Registration: Raider Express
775-4400

Offices and Facilities
Admissions
Undergraduate Admissions, Office of
775-5700  E148 Student Union
Graduate Admissions
775-2976  E344 Student Union
International Student Programs
775-5745  E190 Student Union
School of Medicine
775-2934  210 Medical Sciences Bldg.
School of Professional Psychology
775-3492  110 Health Sciences Bldg.
Affirmative Action Programs
775-3207  075 Allyn Hall
Alumni Relations
775-2620  108 Allyn Hall
Asian, Hispanic, and Native American Center
775-2798  067 Allyn Hall
Athletics
775-2771  356 Nutter Center
Bolinga Black Cultural Resources Center
775-5645  E107 Student Union
Bookstore
775-5600  E182 Student Union
Bursar, Office of the
775-5650  E236 Student Union
Career Services
775-2556  E334 Student Union
Disability Services
775-5680  E186 Student Union
Educational Resource Center
775-2883  116 Allyn Hall
Financial Aid, Office of
775-5721  003 University Hall
Frederick A. White Health Center
775-2300  Frederick A. White Health Center
Honors Program
775-2660  003 University Hall
Housing (Office of Residence Services)
775-4172  6 Palms (in Forest Lane Apts.)
Parking Services
775-5690  E138 Student Union
Personal Counseling Services Center
775-3407  Frederick A. White Health Center

Public Safety
775-2111  118 Campus Services Building
Registrar, Office of the
775-5588  E244 Student Union
Student Employment, Office of
775-2326  E334 Student Union
Student Health Services
775-2552  Frederick A. White Health Center
Student Life, Office of
775-5570  W034 Student Union
Student Union Administrative Office
775-5522  E005 Student Union
Union Activities Board
775-5500  W028 Student Union
University College
775-5750  180 University Hall
University Libraries
Fordham Health Sciences Library
775-2003  125D Medical Sciences Bldg.
Paul Laurence Dunbar Library
775-4125, Hours
775-2525, Circulation
Veterans Affairs, Office of
775-5550  E244 Student Union
Women's Center
775-4524  060 Rike Hall

Colleges and Schools
College of Education and Human Services
775-2821  415 Allyn Hall
College of Engineering and Computer Science
775-5001  405 Russ Engineering Center
College of Liberal Arts
775-2225  129 Allyn Hall
Raj Soin College of Business
775-2437  110 Rike Hall
College of Science and Mathematics
775-2611  134 Oelman Hall
School of Graduate Studies
775-2976  E344 Student Union
School of Medicine
775-3010  114 Medical Sciences Bldg.
School of Professional Psychology
775-3490  117 Health Sciences Bldg.
WSU—Miami Valley College of Nursing and Health
775-3131  160 University Hall
Wright State University–Lake Campus
1-800-237-1477, 419/586-0300
100 Dwyer Hall, 7600 State Route 703, Celina, Ohio 45822
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wright State University</td>
<td>9</td>
</tr>
<tr>
<td>Wright State Today</td>
<td>10</td>
</tr>
<tr>
<td>Wright State's Community Partnerships</td>
<td>11</td>
</tr>
<tr>
<td>Wright State Celebrates Diversity</td>
<td>11</td>
</tr>
<tr>
<td>The Lake Campus</td>
<td>11</td>
</tr>
<tr>
<td>Student Life at Wright State</td>
<td>12</td>
</tr>
<tr>
<td><strong>Academic Programs</strong></td>
<td>13</td>
</tr>
<tr>
<td>Degrees and Areas of Study</td>
<td>14</td>
</tr>
<tr>
<td>Raj Soin College of Business</td>
<td>14</td>
</tr>
<tr>
<td>College of Education and Human Services</td>
<td>14</td>
</tr>
<tr>
<td>College of Engineering and Computer Science</td>
<td>14</td>
</tr>
<tr>
<td>College of Liberal Arts</td>
<td>15</td>
</tr>
<tr>
<td>College of Science and Mathematics</td>
<td>15</td>
</tr>
<tr>
<td>Wright State University-Miami Valley College of Nursing and Health</td>
<td>15</td>
</tr>
<tr>
<td>Minors</td>
<td>16</td>
</tr>
<tr>
<td>Certificates</td>
<td>16</td>
</tr>
<tr>
<td>Lake Campus</td>
<td>16</td>
</tr>
<tr>
<td>The School of Graduate Studies</td>
<td>16</td>
</tr>
<tr>
<td>The School of Medicine</td>
<td>17</td>
</tr>
<tr>
<td>The School of Professional Psychology</td>
<td>17</td>
</tr>
<tr>
<td>Alternative Academic Programs</td>
<td>17</td>
</tr>
<tr>
<td>University Honors Program</td>
<td>17</td>
</tr>
<tr>
<td>Preprofessional Programs</td>
<td>18</td>
</tr>
<tr>
<td>Cooperative Education</td>
<td>19</td>
</tr>
<tr>
<td>Interdisciplinary Study</td>
<td>19</td>
</tr>
<tr>
<td>Consortium</td>
<td>19</td>
</tr>
<tr>
<td>Student Exchange and Study Abroad</td>
<td>20</td>
</tr>
<tr>
<td>Officer Training/ROTC</td>
<td>20</td>
</tr>
<tr>
<td><strong>University Libraries</strong></td>
<td>20</td>
</tr>
<tr>
<td>Other Services</td>
<td>21</td>
</tr>
<tr>
<td>Paul Laurence Dunbar Library</td>
<td>21</td>
</tr>
<tr>
<td>Fordham Health Sciences Library</td>
<td>21</td>
</tr>
<tr>
<td><strong>Computer Resources</strong></td>
<td>22</td>
</tr>
<tr>
<td><strong>Student Life</strong></td>
<td>23</td>
</tr>
<tr>
<td><strong>Student Services</strong></td>
<td>24</td>
</tr>
<tr>
<td>Disability Services</td>
<td>24</td>
</tr>
<tr>
<td>University Center for International Education</td>
<td>24</td>
</tr>
<tr>
<td>Career Services</td>
<td>25</td>
</tr>
<tr>
<td>Center for Psychological Services</td>
<td>25</td>
</tr>
<tr>
<td>Veterans Affairs</td>
<td>25</td>
</tr>
<tr>
<td>Student Health Services</td>
<td>25</td>
</tr>
<tr>
<td>Student Legal Services</td>
<td>25</td>
</tr>
<tr>
<td>Public Safety</td>
<td>25</td>
</tr>
<tr>
<td>Parking and Transportation</td>
<td>26</td>
</tr>
<tr>
<td>Bolinga Black Cultural Resources Center</td>
<td>26</td>
</tr>
<tr>
<td>Women's Center</td>
<td>26</td>
</tr>
<tr>
<td>Asian/Hispanic/Native American Center</td>
<td>26</td>
</tr>
</tbody>
</table>
Facilities ......................................................................................................................................... 26
  Student Union .................................................................................................................................. 26
  Campus Housing ................................................................................................................................. 27
  Food Service ....................................................................................................................................... 27

Co-Curricular Activities ......................................................................................................................... 27
  Campus Recreation ................................................................................................................................. 27
  Sports .................................................................................................................................................... 27
  Music ..................................................................................................................................................... 27
  Cultural Activities ................................................................................................................................. 28
  Organizations and Activities ................................................................................................................. 28
  Academic Competitions ......................................................................................................................... 28

Admission, Advising, and Registration .................................................................................................... 31
  Steps for Students New to Wright State .................................................................................................. 32

Admission ............................................................................................................................................. 32
  High School Preparation ......................................................................................................................... 32
  Degree-Seeking Students ......................................................................................................................... 32
  Wright State University’s Transfer Module ............................................................................................ 35
  Returning Students ................................................................................................................................. 36
  Other Admission and Enrollment Categories .......................................................................................... 36

Orientation ............................................................................................................................................. 37

Placement Testing .................................................................................................................................. 37

Advising .................................................................................................................................................. 38
  New Students Enrolling for Fall Quarter ............................................................................................... 38
  New Students Enrolling for Other Quarters ........................................................................................... 38
  Adult and Transfer Students .................................................................................................................... 38

Financial Aid ......................................................................................................................................... 38
  Scholarships .......................................................................................................................................... 39
  Grants ................................................................................................................................................... 42
  Loans .................................................................................................................................................... 42
  Student Employment ............................................................................................................................... 43
  Veterans’ Benefits .................................................................................................................................. 43

Registration ............................................................................................................................................ 43
  Registration for Writing Intensive (WI) Courses ...................................................................................... 43
  Paying Fees .......................................................................................................................................... 43

Academic Assistance Services .............................................................................................................. 44
  Developmental Education ....................................................................................................................... 44
  Tutoring Services .................................................................................................................................. 44
  Writing Assistance .................................................................................................................................. 44
  Learning English for Academic and Professional Purposes (LEAP) ......................................................... 44
  Summary of Services and Office Phone Numbers ................................................................................... 45

Academic Standards and Requirements .................................................................................................. 47
  Requirements for a Bachelor’s Degree .................................................................................................... 48
  Writing Across the Curriculum (WAC) .................................................................................................... 48
  Second Degrees ..................................................................................................................................... 49
  Graduating with Latin Honors ................................................................................................................ 49
  Applying for Degrees ............................................................................................................................... 50
CONTENTS

Scholastic Policies ................................................................. 50
  Grading System ................................................................. 50
  Grades for Writing Intensive Courses in Writing Across the Curriculum 51
  Academic Standing .............................................................. 51
  Petitioning for Exceptions .................................................. 51
  Repeating and Auditing Courses .......................................... 52
  Dismissal and Readmission .................................................. 52

General Education Requirements ......................................... 53
General Education at Wright State ......................................... 54
  Writing Across the Curriculum in General Education .................. 54
  General Education Substitutions .......................................... 54
  Honors Sections ..................................................................... 54
General Education Requirements ......................................... 55
  Area One—Communication and Mathematical Skills ..................... 55
  Area Two—The Western Experience ...................................... 55
  Area Three—The Non-Western World ..................................... 56
  Area Four—Understanding the Contemporary World .................. 57

Choosing Courses and Majors ............................................... 61
Choosing Courses ..................................................................... 62
  Sources for Courses ............................................................. 62
  Undecided Students ............................................................. 62
  Meeting with an Advisor ..................................................... 62
  Course Selection Tools ......................................................... 62
  First-Year Courses .............................................................. 62
  English Courses .................................................................. 63
  Math Courses .................................................................... 63
  Writing Across the Curriculum ............................................ 63
  Courses Required to Enter a Major ...................................... 63
  Summary ............................................................................. 63
General Education Checklist .................................................. 64
Math and Statistics Sequences .............................................. 65
Still Deciding on a Major? ....................................................... 66
Exploring Majors and Careers ............................................... 66
Summary of Program Admission Requirements ......................... 67

Education and Human Services ............................................. 69
  Athletic Training ................................................................. 78
  Business Education: Integrated ............................................. 79
  Early Childhood Education Pre-K–3 Program .......................... 80
  Health and Physical Education Multi-Age ............................... 82
  Marketing Education ............................................................ 83
  Middle Childhood Education ............................................... 83
  Organizational Leadership .................................................... 84
  Rehabilitation Services ......................................................... 86
  Vocational Education ........................................................... 86

Engineering and Computer Science ....................................... 89
  Biomedical and Industrial and Systems Engineering .................. 92
  Computer Engineering .......................................................... 94
  Computer Science .............................................................. 95
Electrical Engineering ............................................................... 97
Engineering Physics ............................................................... 98
Mechanical and Materials Engineering ................................. 99

Liberal Arts ............................................................................. 103
African and African American Studies .................................. 107
Art and Art History ............................................................... 107
Classics .................................................................................... 110
Communication ...................................................................... 111
Economics ............................................................................... 112
English Language and Literatures ........................................ 113
History ..................................................................................... 116
International Studies ............................................................. 117
Modern Languages ............................................................... 118
Music ....................................................................................... 120
Philosophy .............................................................................. 125
Political Science ..................................................................... 125
Religion ..................................................................................... 127
Selected Studies .................................................................... 128
Social and Industrial Communication .................................. 129
Social Science Education ....................................................... 129
Social Work .............................................................................. 130
Sociology and Anthropology ................................................ 131
Theatre Arts ............................................................................ 133
Urban Affairs and Geography .............................................. 137
Women's Studies Programs .................................................. 141

Nursing and Health ............................................................... 143

Raj Soin College of Business ................................................ 148
Accountancy ............................................................................ 151
Economics .............................................................................. 152
Finance and Financial Services ............................................. 153
International Business ........................................................... 154
Management .......................................................................... 156
Management Information Systems and Operations Management ........................................ 157
Marketing ................................................................................ 159

Science and Mathematics ..................................................... 163
Anatomy ................................................................................... 165
Biochemistry and Molecular Biology ...................................... 166
Biological Sciences ............................................................... 166
Chemistry ............................................................................... 173
Geological Sciences ............................................................. 175
Integrated Science ................................................................ 180
Mathematics and Statistics ................................................ 180
Physics ..................................................................................... 184
Physiology/Biophysics .......................................................... 187
Psychology .............................................................................. 187
CONTENTS

Wright State University – Lake Campus .......................................................... 191
The Lake Campus ............................................................................................... 192
Services ................................................................................................................. 192
Student Organizations and Activities ................................................................. 193
Graduation Requirements for Associate’s Degrees ............................................... 194
Academic Programs ............................................................................................. 194
Technical Associate Degree Programs .................................................................. 202
  Financial Management Technology ................................................................ 202
  Mechanical Engineering Technology Computer-Aided Drafting Design Option .. 202
  Manufacturing Option ..................................................................................... 203
  Office Information Systems ............................................................................. 204
  Office Information Systems—One-Year Certificate Program ......................... 205
  Associate of Technical Study .......................................................................... 206
Certificates ............................................................................................................ 206
  Certificate in Management ............................................................................... 206
  Advanced Certificate in Management .............................................................. 206
  Certificate in Desktop Publishing .................................................................... 207
  Certificate in Word Information Processing .................................................. 207
  Certificate in CAD/CAM .................................................................................. 207
  Certificate in Microcomputer Applications .................................................... 207
  Certificate in Photoshop Design and Applications ......................................... 207
  Certificate in Software Applications .............................................................. 207
Course Descriptions ............................................................................................ 209
Technical Course Descriptions .......................................................................... 343
Faculty and Officers ............................................................................................. 351
Appendix ............................................................................................................... 377
Index ...................................................................................................................... 389
ACADEMIC CALENDARS

Fall Quarter 2001

September 12–December 1, 2001

September 12, Wednesday/First Day of Class
November 12, Monday/Veterans' Day
Observed (No Classes)
November 20, Tuesday/Last Day of Class
November 21–25, Wednesday–Saturday/Thanksgiving Holiday (No Classes)
November 26–December 1, Monday–Saturday/Final Examinations
December 1, Saturday/Fall Commencement

Winter Quarter 2002

January 2–March 16, 2002

January 2, Wednesday/First Day of Class
January 21, Monday/Martin Luther King Jr. Day Observed (No Classes)
March 11, Monday/Last Day of Class
March 12–16, Tuesday–Saturday/Final Examinations

Spring Quarter 2002

March 25–June 8, 2002

March 25, Monday/First Day of Class
May 27, Monday/Memorial Day (No Classes)
June 1, Saturday/Last Day of Class
June 3–8, Monday–Saturday/Final Examinations
June 8, Saturday/Spring Commencement

Summer Quarter 2002

June 10–August 15, 2002

June 10, Monday/First Day of Class, Terms A and C
July 4, Thursday/Independence Day Observed (No Classes)
July 11, Thursday/Last Day of Class, Term A
July 15, Monday/First Day of Class, Term B
August 15, Thursday/Last Day of Class, Terms B and C

Proposed 2002–2003*

Fall Quarter 2002

September 18–December 7, 2001

September 18, Wednesday/First Day of Class
November 11, Monday/Veterans' Day
Observed (No Classes)
November 26, Tuesday/Last Day of Class
November 27–December 1, Wednesday–Sunday/Thanksgiving Holiday (No Classes)
December 2–7, Monday–Saturday/Final Examinations
December 7, Saturday/Fall Commencement

Winter Quarter 2003

January 6–March 22, 2003

January 6, Monday/First Day of Class
January 20, Monday/Martin Luther King Jr. Day Observed (No Classes)
March 15, Saturday/Last Day of Class
March 17–22, Monday–Saturday/Final Examinations

Spring Quarter 2003

March 31–June 14, 2003

March 31, Monday/First Day of Class
May 23, Friday/Last Day for Freshmen to Drop a Class With a Grade of "W"
May 26, Monday/Memorial Day Observed (No Classes)
June 7, Saturday/Last Day of Class
June 9–14, Monday–Saturday/Final Examinations
June 14, Saturday/Spring Commencement

Summer Quarter 2003

June 16–August 21, 2003

June 16, Monday/First Day of Class, Terms A and C
July 4, Friday/Independence Day (No Classes)
July 17, Thursday/Last Day of Class, Term A
July 21, Monday/First Day of Class, Term B
August 21, Thursday/Last Day of Class, Terms B and C

*This proposed 2002–2003 Academic Calendar was not officially approved as this catalog went to press.
Wright State Today

Wright State University, named after aviation pioneers Orville and Wilbur Wright, is a dynamic and diverse institution, with nearly 15,000 students pursuing studies in more than 100 undergraduate majors and 40 graduate and professional degree programs, including the Ed.S., M.D., Psy.D., and Ph.D. degrees. In addition, the Wright State University–Lake Campus, a branch campus located between St. Marys and Celina, Ohio, offers associate and prebaccalaureate degree programs to more than 900 students.

Wright State's 557-acre main campus, located 12 miles northeast of Dayton, has over 20 major buildings and a 200-acre biological preserve. The Ervin J. Nutter Center, a multipurpose sports and entertainment complex, seats 10,632 for Wright State Raiders basketball games and up to 12,000 for top-name entertainers and shows. The Russ Engineering Center opened its doors in fall 1992 and serves as a centerpiece of engineering education and research in the community. The Student Union provides a wide array of recreational facilities and houses the offices of the bursar, registrar, admissions, and financial aid, as well as numerous other offices. University Hall, Wright State's newest building, is home to the College of Nursing and Health and many administrative offices.

The University Libraries include the Paul Laurence Dunbar Library—named for the noted poet and Dayton native, the Fordham Health Sciences Library, and the Music Library. Wright State's was one of the first libraries in the state to introduce the new OhioLINK computer system, enabling students to search and request the holdings of more than 50 academic libraries in Ohio. The library's Department of Archives and Special Collections houses one of the world's most complete collections of original documents, memorabilia, and personal photographs from the Wright brothers. The collection has been featured on the Arts and Entertainment Channel's Biography series on the Wright brothers.

Wright State is nationally recognized as a leader in programs and services for people with disabilities. All campus buildings are designed to be accessible to people with disabilities, and most are joined by an extensive underground tunnel system.

The university seeks excellence in all of its academic programs, many of which receive national recognition. The Department of Theatre Arts is recognized as one of the premier performing arts centers for undergraduate training and performance in the nation. It is the only such arts program to win two prestigious Program Excellence Awards and two Academic Challenge Grants from the Ohio Board of Regents. The department has established a growing reputation for superior theatrical production of musicals and dramas and has been repeatedly spotlighted: by winning a record 14 awards from the American College Theatre Festival (ACTF) in 1997 for 1913: The Great Dayton Flood; by being the only university in a four-state region to take two productions to the XXI Kennedy Center ACTF regional competition in 1998; by the department's design technology area winning the United States Institute of Theatre Technology Olympics in 1995 and 1997; and, in the area of film, by winning awards from major film festivals across the world, from the most recent Audience Award at the Los Angeles Independent Film Festival to the Sundance Festival. Wright State accountancy majors have consistently taken top honors at the Student Case Competition, sponsored by the Institute of
Management Accountants, and three times, WSU graduates have earned the highest score in Ohio in the state's certified public accounting exam. The Department of Financial Services has also earned an Award of Excellence from the Ohio Board of Regents, and Wright State's Department of Chemistry ranks in the top 10 percent nationally in the number of bachelor's degree graduates certified by the American Chemical Society.

Wright State provides distance learning opportunities and collaborations through the Internet with government, industry, and regional agencies for both service and instruction. The College of Education and Human Services is linked with 40 school systems, and the College of Nursing and Health is linked with the Lake Campus to provide education in a rural area.

The main accreditation agency for Wright State is the North Central Association of Colleges and Schools. A full listing of accreditations and memberships can be found in the Appendix on page 383.

Wright State’s Community Partnerships

Wright State provides its students with unique opportunities to help solve real-world problems by addressing the educational, cultural, social, and economic needs of the Miami Valley. Students obtain hands-on learning experiences through the university's link to area corporations, community programs, health and social service agencies, and government organizations. This blending of academia with the larger community provides benefits for both. At the heart of this mission is the scholar, who links the discovery of new knowledge to solving community problems and improving the quality of life for society.

With its commitment to service and collaboration, Wright State's impact is felt most strongly here in the Miami Valley, where its partnerships improve the quality of life for everyone. Dayton's Center for Healthy Communities, a partnership between Wright State's Schools of Medicine and Professional Psychology, College of Nursing and Health, Department of Social Work, Sinclair Community College's Allied Health Division and other health organizations, was selected as a national model for developing community partnerships in health care by the U.S. Department of Health and Human Services. The center brings together students in the health professions fields with residents of under served neighborhoods that need access to health services and wellness programs. The Information Technology Research Institute (ITRI), a cooperative research and development organization, is a partnership between Wright State and the Miami Valley's industrial and governmental organizations involved in the burgeoning information technology field. The institute's goal is to conduct basic and applied research and to speed university research to the marketplace.

Wright State Celebrates Diversity

Wright State has many programs and resources to help students of diverse backgrounds and cultures understand and accept one another.

As an equal opportunity/affirmative action institution, the university encourages and welcomes students of all ethnic and religious backgrounds, ages, and nationalities. Bringing these students together with an active campus life creates a rich intellectual and social experience—a complete university experience.

Providing academic and personal support to students, the Bolinga Black Cultural Resources Center promotes cultural diversity on campus and in the community through a variety of programs and activities celebrating the African American experience. The Asian, Hispanic, and Native American Center supports the academic, social, and cultural needs of Asian, Hispanic, and Native American students, faculty, and staff at the university, offering informational resources as well as programs consisting of guest speakers, workshops, film series, and celebrations of the Hispanic, Native American, and Asian heritage months. The University Center for International Education provides services to international students and Wright State students wishing to study abroad. The Women's Center promotes diversity and gender equity through educational programs and activities that honor the roles, contributions, and experiences of all women. An abbreviated version of Wright State's equal opportunity/affirmative action and diversity statements can be found in the Appendix on page 382. The complete text can be found on WSU's Web page at http://www.wright.edu/admin/affirm/affirm.html

The Lake Campus

Located on the shore of Grand Lake St. Marys between Celina and St. Marys, the Wright State University–Lake Campus provides higher educational opportunities in a unique setting. The Lake Campus offers associate and baccalaureate degree programs, and a limited number of upper division and graduate courses, with day, evening, and weekend classes. The Education Department at the Lake Campus has grown to include all four years of Early Childhood Education and over half of the required courses for other education majors. Another recent development is the addition of the Organizational Leadership (OL) Program, which allows a student to use the credits he or she earned for an associate's degree and apply them to the Bachelor of Science in Organizational Leadership Degree. The OL Program benefits students by enabling the individual to maximize transfer of credit. Employers benefit because OL graduates have developed the leadership skills so vital in today's business climate. Also offered entirely at the Lake Campus is a weekend program offered through the Raj Soin College of Business that leads to a Master of Business Administration; and an outreach program through
the College of Nursing that permits RNs to earn a B.S.N. A variety of preprofessional and certificate programs are offered at the Lake Campus; a transfer module is provided to students to ease their transition into bachelor's degree programs.

**Student Life at Wright State**

Wright State has a diverse mixture of students with various educational goals and interests. The majority of our students—76 percent or about 11,900—are undergraduates, and of those, about 10,900 are full time. Although the majority of these students come from southwestern Ohio, many also come from other parts of Ohio, from almost every state in the nation, and from 69 other countries.

Over 2,200 students live in campus housing, in either traditional dormitory-style rooms, suite-style rooms, or apartments, all offering direct Internet connections. Nearly 1,300 freshman students chose to live on campus in fall 2000.

Many of our students are older (mean age is 25 years) and, in addition to their academic work, have other major responsibilities such as a family and/or full-time job. Many of these students attend classes in the evening, a time that sees almost as much campus activity as during the day. Regardless of background and career goals, our students provide the basis for a campus rich in cultural and intellectual diversity.

Both commuting and residential students make for an active campus life. Over 100 student clubs and organizations provide recreational, professional, and entertainment activities, such as the Artist Series Program. Also popular are the university's two theaters and concert halls, and the Student Union, which has extensive recreational facilities, including a fitness center, a small gymnasium, racquetball and squash courts, and an Olympic-size indoor pool.

Wright State students have distinguished themselves academically, both on the state and national level. For example, Wright State students compete with 200 colleges and universities from fifteen different countries that debate each year at the Model United Nations program held in New York City and now hold the longest winning streak on record—22 years. The Ohio Society of Professional Engineers awarded our student team first place in a statewide senior design showcase. More valedictorians in the Miami Valley chose Wright State in 2000 than any other school in the nation, according to the *Dayton Daily News*.

In recognition of its innovations in teaching and research, the Department of Mathematics and Statistics has received Academic Challenge Grants from the Ohio Board of Regents and highly selective external funding awards from the National Science Foundation and other federal agencies. In addition, undergraduate students in the Department of Mathematics and Statistics compete each year in the William Lowell Putnam Mathematical Competition.

The student is the focus of attention at Wright State University. Although Wright State students do not easily fall into specific categories, all are valued for their unique talents and contributions. In a supportive learning environment, Wright State faculty challenge their students, encouraging them to realize their potential, to reach their goals, and to fulfill their dreams. As a result, Wright State continues to attract achievement-oriented students who are eager to learn.
ACADEMIC PROGRAMS
Degrees and Areas of Study

Wright State University offers undergraduate programs in the Raj Soin College of Business and the Colleges of Education and Human Services, Engineering and Computer Science, Liberal Arts, Nursing and Health, and Science and Mathematics; and through the Wright State University–Lake Campus. Graduate programs are offered through the School of Graduate Studies. The Schools of Education and Professional Psychology offer professional and other post-baccalaureate programs.

Wright State grants these baccalaureate degrees: Bachelor of Arts (B.A.), Bachelor of Fine Arts (B.F.A.), Bachelor of Music (B.Mus.), Bachelor of Science (B.S.), Bachelor of Science in Biomedical Engineering (B.S.B.E.), Bachelor of Science in Business (B.S.B.), Bachelor of Science in Computer Engineering (B.S.C.E.), Bachelor of Science in Computer Science (B.S.C.S.), Bachelor of Science in Education (B.S.Ed.), Bachelor of Science in Electrical Engineering (B.S.E.E.), Bachelor of Science in Engineering Physics (B.S.E.P.), Bachelor of Science in Human Factors Engineering (B.S.H.E.), Bachelor of Science in Materials Science and Engineering (B.S.M.S.E.), Bachelor of Science in Mechanical Engineering (B.S.M.E.), Bachelor of Science in Medical Technology (B.S.M.T.), and Bachelor of Science in Nursing (B.S.N.).

The following associate degrees, available only at the Wright State University–Lake Campus, are also granted: Associate of Arts (A.A.), Associate of Science (A.S.), Associate of Applied Business (A.A.B.), Associate of Applied Science (A.A.S.), and Associate of Technical Study (A.T.S.).

The following descriptions give a brief overview of the colleges and schools and list the fields of study for which Wright State offers baccalaureate degree programs.

Raj Soin College of Business—see page 147

Bachelor of Science in Business degree programs are offered with majors in accountancy, business economics, finance, financial services, human resource management, international business, management, management information systems, operations management, and marketing. The college also offers a Master of Business Administration degree, a Master of Accountancy, and a Master of Science in Social and Applied Economics degree.

Baccalaureate Programs in Business and Administration

Accountancy (B.S.B.)
Business Economics (B.S.B.)
Finance (B.S.B.)
Financial Services (B.S.B.)
Human Resource Management (B.S.B.)
International Business (B.S.B.)
Management (B.S.B.)
Management Information Systems (B.S.B.)
Marketing (B.S.B.)
Operations Management (B.S.B.)

College of Education and Human Services—see page 69

Primarily a professional school, the college is devoted to preparing entry-level teachers, educational administrators, and other school leaders, and to preparing professionals in human services, such as counseling and rehabilitation. The college awards the Bachelor of Science in Education and Bachelor of Science degrees. The college also offers master's degrees and the Educational Specialist degree.

Baccalaureate Programs in Education and Human Services

Athletic Training (B.S.Ed.)
Early Childhood Education (Pre-K–3, Ages 0–8) (B.S.Ed.)
Health and Physical Education (Multi-Age, Pre-K–12, Ages 3–21) (B.S.Ed.)
Integrated Business Education (B.S.Ed.)
Marketing Education (B.S.Ed.)
Middle Childhood Education, Grades 4–9 (B.S.Ed.)
Organizational Leadership (B.S.)
Rehabilitation Services (B.S.)
Vocational Education (B.S.Ed.)

College of Engineering and Computer Science—see page 89

The college offers programs leading to Bachelor of Science degrees. Programs of study include biomedical engineering, computer engineering, computer science, electrical engineering, engineering physics, human factors engineering, materials science and engineering, and mechanical engineering. Each of the programs includes cooperative education opportunities. The college also offers master's degrees and a doctoral degree in engineering and master's degrees and a doctoral degree in computer science and computer engineering.
Baccalaureate Programs in Engineering and Computer Science
Biomedical Engineering (B.S.B.E.)
Computer Engineering (B.S.C.E.)
Computer Science (B.S.C.S.)
Electrical Engineering (B.S.E.E.)
Engineering Physics (B.S.E.P.)
Human Factors Engineering (B.S.H.F.E.)
Materials Science and Engineering (B.S.M.S.E.)
Mechanical Engineering (B.S.M.E.)

College of Liberal Arts—see page 103
The college offers programs in the fine arts, social sciences, and the humanities, which lead to the Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, and Bachelor of Science degrees. Many different career orientations are available through liberal arts studies. The college also offers master's degrees.

Baccalaureate Programs in Liberal Arts
Acting (B.F.A.)
Acting—Musical Theatre (B.F.A.)
African and African American Studies (B.A.)
Anthropology (B.A.)
Art (B.A., B.F.A.)
Art Education (B.F.A.)
Art History (B.A.)
Art History/Art Studio (B.A.)
Classical Humanities (B.A.)
Communication Studies (B.A.)
Dance (B.F.A.)
Economics (B.A.)
English (B.A.)
English: Integrated Language Arts (B.A.)
French (B.A.)
Geography (B.A., B.S.)
German (B.A.)
Greek (B.A.)
History (B.A.)
Integrated Language Arts/English Education (B.A.)
International Studies (B.A.)
Latin (B.A.)
Mass Communication (B.A.)
Modern Languages (B.A.)
Motion Picture History, Theory, and Criticism (B.A.)
Motion Picture Production (B.F.A.)
Music (B.A.)
Music Education (B.Mus.)
Music History and Literature (B.Mus.)
Music Performance (B.Mus.)
Organizational Communication (B.A.)
Philosophy (B.A.)
Political Science (B.A.)
Religion (B.A.)
Selected Studies (B.A., B.F.A.)

Social and Industrial Communication (B.A.)*
Social Science Education (B.A.)
Social Work (B.A.)
Sociology (B.A.)
Spanish (B.A.)
Theatre Design/Technology/Stage Management (B.F.A.)
Theatre Studies (B.A.)
Urban Affairs (B.A., B.S.)
Women's Studies (B.A.)

*Dual major

College of Science and Mathematics—see page 163
The college offers programs leading to the Bachelor of Science, Bachelor of Science in Clinical Laboratory Science, and Bachelor of Arts degrees, as well as interdisciplinary programs. The college also offers master's degrees and doctoral degrees.

Baccalaureate Programs in Science and Mathematics
Biological Sciences (B.S., B.A.)
Biological Sciences Education (B.S., B.A.)
Chemistry (B.S., B.A.)
Chemistry Education (B.S.)
Clinical Laboratory Science (B.S.C.L.S.)
Environmental Sciences (B.S.)
Geological Sciences (B.S., B.A.)
Geological Sciences Education (B.A.)
Integrated Science Education (B.S.)
Mathematics (B.S., B.A.)
Mathematics Education (B.S.)
Physics (B.S., B.A.)
Physics Education (B.A.)
Psychology (B.S., B.A.)

Wright State University–Miami Valley College of Nursing and Health—see page 143
The program in nursing at Wright State leads to the Bachelor of Science in Nursing degree, which qualifies the graduate for the National Council of State Boards Licensing examination (NCLEX) required for state licensure as a registered nurse. The college also offers a B.S.N. completion program for registered nurses and a Master of Science program.

Baccalaureate Program in Nursing
Nursing (B.S.N.)
Minors

A minor program is a structured and coherent secondary concentration of study. It gives undergraduates the option of studying a second field of specialization in addition to a major as part of their studies at the university. Students interested in pursuing a minor should confer with the appropriate department for details.

The university offers minors in the following areas:

- African and African American Studies
- Anthropology
- Business
- Classical Humanities
- Communication
- Computer Science for Engineers and Scientists
- Computing and Information Technology
- Economics
- English
- French
- Geography
- Geological Sciences
- Health Sciences
- History
- Management
- Management Information Systems
- Marketing
- Materials Science and Engineering
- Mathematics
- Music
- Operations
- Management
- Physics
- Political Science
- Psychology
- Rehabilitation Services
- Religion
- Sociology
- Spanish
- Statistics
- Urban Affairs
- Women’s Studies

Certificates

The university’s main campus offers certificate programs in the following areas: cartography, photogrammetry, and remote sensing; gerontology; object-oriented programming; professional writing; teaching English to speakers of other languages (TESOL); and technical writing. The WSU–Lake Campus offers certificates in CAD/CAM, management and advanced management, desktop publishing, word/information processing; microcomputer applications, software applications, and Photoshop design and applications.

Lake Campus

The Lake Campus offers the Associate of Arts and Associate of Science degrees, as well as a variety of two-year Associate of Applied Business, Associate of Applied Science, and Associate of Technical Study degree programs. These programs and other degree programs are described in more detail beginning on page 192.

The School of Graduate Studies

The School of Graduate Studies is responsible for 39 master’s degree programs, a post-master’s degree (Educational Specialist), Doctor of Philosophy degrees in biomedical sciences, computer science and engineering, engineering, and human factors and industrial/organizational psychology, as well as courses for licensure programs in education, and courses for various certificate programs. Master’s degrees are offered in the following fields of study:

Master of Accountancy

Master of Arts

Applied behavioral science, classroom teacher, counseling, educational administrative specialist, educational leadership, English, history, intervention specialist, pupil personnel services, selected graduate studies

Master of Business Administration

Administration of nursing and health care systems, business economics, finance, international business, logistics management, management, management information systems, marketing, operations management, project management

Master of Education

Classroom teacher, educational administrative specialist, educational leadership, pupil personnel services

Master of Humanities

Master of Music

Music education

Master of Rehabilitation Counseling

Chemical dependency, severe disabilities

Master of Science

Administration of nursing and health care systems, aerospace medicine, anatomy, applied statistics, biochemistry and molecular biology, biological sciences, chemistry, computer science, counseling, geological sciences, human factors and industrial/organizational psychology, intervention specialist, mathematics, microbiology and immunology, nursing, physics, physiology and biophysics, selected graduate studies, social and applied economics

Master of Science in Computer Engineering

Master of Science in Engineering

Biomedical, electrical, human factors, materials science and engineering, mechanical

Master of Science in Teaching

Earth science, physics education

Master of Urban Administration
The School of Medicine

The School of Medicine’s educational program prepares students for graduate medical education (residency training) in their field of choice. Graduates of this four-year program receive the Doctor of Medicine (M.D.) degree.

The School of Professional Psychology

The School of Professional Psychology offers a doctoral program in clinical psychology that prepares students for work as professional psychologists. The program requires approximately four years of study and grants the Doctor of Psychology (Psy.D.) degree.

Alternative Academic Programs

University Honors Program

The University Honors Program is designed to meet the special needs of a diverse population of academically well-prepared students. First-year students can qualify by meeting two of the following criteria:

- a high school GPA of 3.25 or better;
- a ranking in the top 10 percent of their graduating class; or
- a score at or above the 90th percentile on the ACT.

Continuing Wright State students and transfer students with a GPA of 3.0 or better are eligible to participate.

The Honors Program is also interested in students who may not quite meet these qualifications but who bring some special contribution or determination to the program. Such students will be permitted to enroll in selected honors courses where they can demonstrate that they merit full participation.

The Honors curriculum offers three types of undergraduate courses: most general education courses are presented in special Honors sections; popular introductory courses in certain majors are offered as Honors courses; and special interdisciplinary courses are offered for sophomores, juniors, and seniors. Honors students also pursue special programs of study in their majors, usually in their junior or senior year. These programs involve independent study with a faculty mentor and culminate in a research report, design project, or senior thesis. Each department, college, or school has its own admissions and performance criteria, which are available for review in the Honors office.

Students may graduate with one of three Honors designations by completing the following sets of requirements:

A. To graduate with the distinction “University Honors Scholar,” students must

1. Complete eight Honors courses with grades of B or better, including (a) at least one course from the UH 201, 202, 203 sequence; (b) at least three courses that are classified as General Education courses (these may include UH 201, 202, 203); and (c) at least two interdisciplinary seminars (UH 400).

2. Successfully complete a departmental, school, or college Honors program.

B. To graduate with the distinction “General Studies Honors Scholar,” students must complete eight Honors courses (as described above for “University Honors Scholars”) with grades of “B” or better and attain a cumulative GPA of 3.4 or better.

C. To graduate “With Honors” in their major fields, students must complete a departmental, school, or college Honors program.

Students normally complete the Honors Program by taking three Honors courses their first year, three as a sophomore, one as a junior, and one as a senior. However, students are free to take as many or as few courses as their interest and program requirements permit. All Honors courses are designated as Honors on transcripts, and students who complete the program receive special designations on their transcripts and recognition in the commencement program.

The Honors Program also offers opportunities for social, cultural, and leadership development through participation in the Student Honors Association; Service Learning; the Mid-East Honors Association; the National Collegiate Honors Council; and the University Honors Committee. A new Honors residence hall opens in the fall of 2001. It features a faculty member in residence, a classroom, computer labs, and social space. Programming will focus on issues and ideas and allow residents to become involved in service floors or theme floors. The Honors Living Learning Center also houses services such as computer support (CaT$S) and campus security. The Honors Program awards scholarships to both incoming and continuing honors students. Small grants are available for students working on honors projects, and some financial assistance is available for Honors program students who wish to study abroad.
Interested students should contact the Honors Program office for further information and applications: (937) 775-2660, 179 Millett, honors@wright.edu

Preprofessional Programs

Premedical and Predental Study

There is no specific preferred major for premedicine or predentistry. Students may choose from a variety of undergraduate majors; however, they need to complete certain required courses for admission. Most applicants major in biology or chemistry, but it is important to choose a major in a field of interest to the student. Numerous majors allow students to take required pre-med courses and use the credits to fulfill electives in the major. In addition, there are numerous recommended courses, primarily in the sciences, which would make students more competitive applicants. Since the competition for admission is so strong, each student needs to maintain a high GPA (approximately a 3.5), do well on the Medical College Admission Test (MCAT), which is generally taken in April of the junior year, and be active in community volunteer work.

Planning and performance are important. Students should work with an academic advisor to plan the freshman-year class schedule, which would, ideally, include chemistry 121, 122, and 123, among other courses. A student with Math Placement Level of 3 or lower may be delayed entrance into chemistry courses, so it is important to plan ahead. Beginning their sophomore year, students should meet annually with the premedical advisor to plan their class schedules and make sure that they are taking the required courses. The premedical advisor also can suggest other courses that will help improve a student’s performance on the MCAT.

The following courses are required for medical school admission, (depending on the student’s major, they may be taken as part of the degree requirements or in addition to the degree requirements):

- BIO 112 Cell Biology and Genetics
- BIO 114 Organismic Biology
- BIO 115 Diversity and Ecology
- CHM 121 Submicroscopic Chemistry
- CHM 122 Macroscopic Chemistry
- CHM 123 Reaction Dynamics
- CHM 211/215 Organic Chemistry I and lab
- CHM 212/216 Organic Chemistry II and lab
- CHM 213/217 Organic Chemistry III and lab
- PHY 111/101 Physics I and lab
- PHY 112/102 Physics II and lab
- PHY 113/103 Physics III and lab
- ENG 101,102, and one other writing course (for a total of one year of English)
- MTH College Algebra and Trigonometry (MTH 130 and 131 or MTH 134)

Recommended courses include:
- BMB 421, 423, and 427 Biochemistry and Molecular Biology
- P&B 301 and 302 Human Physiology
- M&I 220 Pathogenic Microbiology
- ANT 201 and 202 Human Anatomy
- BIO 210, 211, and 212 Molecular Biology, Cell Biology, and Genetics
- PHR 340 Pharmacology
- PHL 378 or REL 378 Bioethics

Students who have received Advanced Placement (AP) credits from their high school science courses should take additional upper-level courses in those sciences to demonstrate proficiency. For example, a student who has placed out of a whole year of biology (BIO 112, 114, 115) should be sure to take some 200-level biology courses to demonstrate the ability to achieve in college-level biology.

Prelaw Study

Prelaw is not a major or degree program, so students are free to choose from a wide variety of undergraduate majors. Many different areas of study can prepare students for law studies. When choosing a major, students should select an area in which they have a strong interest and in which they can do well academically. The prelaw advisor at Wright State will help plan a personal prelaw program.

To a large extent, admission to law school depends on the basic skills that students master as an undergraduate. The ability to communicate, reason clearly, and think independently are more important than the area of a student’s major. Many disciplines help build these skills. Speaking and writing skills can be sharpened in a history class as well as in a literature class, and reasoning ability can be developed in a chemistry lab as well as in a philosophy seminar.

Competition for admission to law school is keen, and a student’s academic record is one of the key criteria. A major in political science, business, history, or other fields connected with law does not guarantee admission. An excellent academic record in the sciences, math, languages, or other areas that are not usually associated with law may have equal or even greater appeal to law schools.
Suggested Courses for Prelaw Study

The following courses can provide a taste of what the study of law is about and what those who choose a legal career can expect. Students may take as many or as few of these courses as they like. These courses are neither a prelaw program nor prerequisites for law school, and they do not relate to the intensive approach used in law school studies.

ACC 201, 202 Accounting Concepts and Principles I, II, III
ACC 203 Introduction to Accounting Systems
COM 232 Argumentation and Debate
EC 201, 202, 203 Principles of Economics
EC 351 Labor Markets
EC 477 Economic Studies
ENG 240 Intermediate Composition
FIN 301, 302 Business Finance I, II
FIN 332 Case Problems in Financial Management
FIN 332 Real Estate Law
FIN 462 Estate Planning
LAW 301 The Legal Environment of Business
LAW 360 Legal Aspects of Business Organizations
LAW 370 Legal Aspects of Commercial Transactions
LAW 420 Legal Aspects of Managing a Diverse Workforce
LAW 480 Special Topics in Law
PHL 124 Social Ethics and Values
PHL 211 Introduction to Ethics
PHL 215 Inductive Logic
PHL 223 Symbolic Logic I
PHL 378 Ethics and Medicine
PHL 472 Philosophy of Social Science
PLS 340 Law and Society
PLS 342 Civil Liberties I
PLS 343 Civil Liberties II
PLS 436 Criminal Law
PLS 437 Criminal Procedure
PLS 438 Environmental Law and Policy
PLS 439 Bioethics and Law
PLS 440 Constitutional Law
PLS 442 American Criminal Justice System
PLS 443 Administrative Law Procedure
PLS 471 International Law
PLS 482 Legislative Internship
SOC 315 Drug and Alcohol Intervention Workshop
SOC 330 Criminology
SOC 332 Juvenile Delinquency
SOC 432 Penology
SOC 433 Internship in Corrections and Family
SOC 439 Selected Topics in Problems/Deviance
URS 399 Studies in Selected Subjects

Cooperative Education

Cooperative education is available through Career Services and offers students the opportunity to work full time or part time in a career-related position. Job placements are monitored by the Career Services staff or by faculty. Academic credit for work experience may be earned in some departments. In all departments, students are required to register with Career Services, and the work experience and employer name are recorded on the transcript.

Through this program, students can gain valuable learning experiences, test career interests, learn more about career fields, and develop job-related skills, as well as earn income for college expenses.

Interdisciplinary Study

Interdisciplinary study gives students a chance to explore different areas or to tailor a major to their interests. Many courses are offered jointly by cooperating departments, including African American Studies, Integrated Language Arts, Social Science Education, International Studies, and Women's Studies. Students can also combine work in two different departments for a double or dual major. The selected studies major offered by the College of Liberal Arts allows students to pursue a self-designed course of study, culminating in a senior project, in an area where a major is not currently available. For more information on any of the programs, students should see the selected studies advisor.

Consortium

Wright State students also have hundreds of additional classes available to them through the university's membership in the Southwestern Ohio Council for Higher Education, an association that includes many colleges and universities in the area. Full-time students at Wright State may cross-register for credit at member schools at Wright State's tuition rates as long as class space is available, they have their advisor's consent, and the course isn't offered at Wright State. They must also meet course and host college prerequisites.

The consortium also offers cooperative library privileges to students at all member institutions. These library holdings total more than a million volumes.
Student Exchange and Study Abroad

Students can study abroad through a variety of international programs offered through Wright State. The three-week summer Ambassador Program in Brazil or Japan provides an introductory experience with independent study credit available. Wright State’s consortium study abroad program offers a full array of courses in foreign language study and in a variety of disciplines, many of which are taught in English. Courses can be taken during a summer, semester, or year academic program. The consortium countries include: Australia, Chile, China, Costa Rica, Denmark, England, France, Germany, Israel, Italy, Malta, New Zealand, Scotland, Spain, and Thailand. Wright State also offers exchange programs with universities in Chile, England, France, and Sweden. For these programs, students pay Wright State tuition. For all Wright State exchange and study abroad programs, students can apply their student scholarships and loans.

Officer Training/ROTC

The Army and Air Force offer the Reserve Officer Training Corps (ROTC) program to all qualified students. The purpose of ROTC is to educate selected men and women for positions of responsibility and afford them the opportunity to be commissioned as second lieutenants in the Army and Air Force. The Army also offers the option for duty in the National Guard or Reserves.

The first two years of both programs have no military obligation. Each offers a competitive scholarship program and depending on the scholarship amount pays the student’s tuition, buys all books, and provides $200 a month. Students involved in the Advanced (Army) or contracted in the Professional Officer (Air Force) course also receive $200 a month during the school year.

Both programs are available to students with only two or three years remaining in their degree program. Two-year and compression programs have been established to make the ROTC program available to freshmen and sophomores or to juniors and seniors who will be enrolling in graduate study. Through a special program, advanced placement credit may be given to veterans, JROTC students, and sophomore students who attend a five-week AROTC Basic Camp. Graduate students with two years of school remaining are eligible for both ROTC programs.

The Army program is administered in two parts. The basic course emphasizes practical leadership and management skills that are equally applicable to both military organizations and private industry. The advanced course is designed to prepare students to be commissioned officers by including practical study in tactics, training, management, leadership techniques, and the exercise of command. During the summer quarter between the junior and senior years, students attend a five-week ROTC Advanced Camp that provides them with the opportunity to apply the leadership and technical training received in the classroom. While at camp, cadets are paid half of the salary of a second lieutenant.

The Air Force ROTC programs are the General Military Course (GMC) and Professional Officer Course (POC). The GMC introduces students to the Air Force and its history through one hour of class and two hours of leadership laboratory each week. The POC consists of courses in management, leadership, American defense policy, and introduction to command. Six courses involving three hours of class and two hours of leadership laboratory each week are required. Summer field training, which emphasizes leadership development and experience in the military environment, is four or five weeks long and is normally attended between the sophomore and junior years.

Further information is available in the Department of Military Science (Army) and the Department of Aerospace Studies (Air Force), (937) 775-2730, and at our Web site, www.wright.edu/academics/prog/rotc.

University Libraries

The Wright State University Libraries include the Paul Laurence Dunbar Library, the Fordham Health Sciences Library located in the Medical Sciences Building, and the Music Library in the Creative Arts Building.

The University Libraries are members of OhioLINK, an advanced computer network providing access to over 30 million library items in Ohio’s university, college, and State Library collections. Students can order books online from OhioLINK libraries and receive them for check-out within two to three days. OhioLINK resources also include scores of research databases and the full text of thousands of journals and other works.

LIBNET, the Libraries’ information research system, uses a Web-based interface to provide integrated access to local and OhioLINK resources and to many other resources available on the Internet.
Other Services

- Instructional sessions for all library services and resources
- Current periodicals and microfilm resources (microfilm readers and printers)
- Course reserves (online and print)
- Media collections (videos, films, preview equipment)
- Music Library (20,000 scores and over 6,000 musical recordings)
- Reference assistance (individual or group instructions and handouts)
- Interlibrary loan services for items not available at Wright State or through OhioLINK

Paul Laurence Dunbar Library

The Paul Laurence Dunbar Library plays an important role in instruction and research activities at Wright State University. The library collections, among the largest in the Dayton metropolitan area, include over 590,000 bound volumes, over one million microforms, 350,000 government documents, 4,000 serial subscriptions, and more than 4,000 media or visual items. The library is open over 100 hours per week, longer during exam periods. In addition to the walk-in assistance available in the information/reference area during most hours, students may make appointments with reference librarians for in-depth assistance. Librarians also offer group instruction through a series of regularly offered workshops on topics ranging from basic LIBNET introduction to advanced searching of Web resources and specialized databases.

As a partial U.S. government documents depository, the library provides students and the general public with access to electronic and print documents, including over 30,000 geographical and topographical maps from all over the United States.

Special Collections and Archives houses collections on aviation history, Wright State University history, and one of the most extensive collections of Wright brothers materials, including more than 4,000 original photographs made by the Wrights to document their achievements.

The Fordham Health Sciences Library

The Fordham Health Sciences Library serves as the primary library for students in the College of Nursing and Health and Schools of Medicine and Professional Psychology. The Fordham Library contains 115,000 bound volumes, 1,300 serial subscriptions, and more than 12,000 microforms. The collections also contain audio-visual programs related to the health sciences and equipment for viewing or listening to these programs. Videotaped lectures are available for selected courses in the College of Nursing and Health. Group study rooms are also available for nursing students. The library is open 98 hours a week.

A unique cooperative relationship among the area's hospital libraries and the Fordham Health Sciences Library promotes sharing and nonduplication of library materials as well as reciprocal library services for students and professionals in the health care fields. Seven of the hospital libraries participate in OhioLINK; over 100,000 volumes in these affiliated libraries complement the university collections.

Special collections of the Fordham Library include the McFarland Collection in aerospace medicine and human factors engineering, the Aerospace Medical Association Archives, and the Wright State health sciences programs archives. The Thelma Fordham Pruett Rare Book Room houses rare American 18th- and 19th-century medical books.
Computer Resources

Computing and Telecommunication Services (CaTS) provide connectivity to a wide range of computing and information resources through the campus network. These resources are multi-user systems maintained by CaTS and the College of Computer Science and Engineering (i.e., Hitachi, Digital VAX, UNIX), and include the Wright State University Libraries' catalogs, OhioLINK Libraries' catalogs, electronic mail, and other INTERNET resources.

CaTS provides direct connectivity to the campus network at public workstations located in the basement of the Library Annex. These are student labs with full network services, including word processing, spreadsheets, INTERNET connectivity, and a variety of specific course-related software. These laboratories have a range of printers, scanners, and CD ROMs available for student usage. In addition to these public workstations, many colleges and academic departments provide additional resources for their majors.

All students are eligible to receive an account for access to these systems, thus enabling access to INTERNET resources. For more information on CaTS services and training, contact the CaTS Help Desk in the basement of the Library Annex.
STUDENT LIFE
Student Services

In addition to classes and academic programs, Wright State has many services, facilities, and activities designed to help students enjoy all of the benefits of university life and develop interpersonal and leadership skills. The student affairs offices are staffed by professionals trained to help students appreciate other cultures, develop leadership and life skills, clarify values, model ethical behavior, and encourage healthy relationships and lifestyles. Most of these services are free, and students are invited to visit the offices anytime.

Disability Services

Extending the opportunities of higher education to people with disabilities is a high priority at Wright State. The university’s Office of Disability Services offers programs to promote each student’s academic, personal, physical, and vocational growth so that people with documented disabilities can realize their full potential. The office also serves as a resource to faculty and staff throughout the university.

Academic Support

These services are designed to assist students with documented disabilities in meeting all academic requirements at the university. Eligible students may receive classroom accommodations such as sign language interpreters, lab assistance, or reader/writer service. The Office of Disability Services can administer exams outside the normal classroom for students needing additional time and/or reading and writing assistance due to disability-related limitations.

Adaptive Technology and Adaptive Media

The Technology Center provides classroom materials in alternative formats that include audiotape, Braille, and image enhancement for eligible students. Consultations regarding computer adaptations and technology-related accommodations are available through a certified Adaptive Technology Specialist. Classes for new users of adaptive technology are offered during the academic year.

Physical Support

Physical support services include personal assistance with daily hygiene requirements, parking for persons with mobility impairments, assistance in locating adapted housing off-campus, training in the activities of daily living to achieve a greater degree of independence, and the coordination of campus mobility orientation for students who have visual impairments.

Career and Vocational Support Services

These services assist students with documented disabilities in making career choices, and in the planning and development of their careers. Opportunities also exist for students to have various work-site experiences. These methods allow students to make realistic decisions about future careers and ensure that the students are able to meet the demands of their chosen occupations.

Eligibility

Applicants requesting services available to students with disabilities should contact the Office of Disability Services prior to enrollment. A copy of professional documentation of disability from the original source(s) should be submitted prior to a pre-service interview. A pre-service interview is designed to assess disability-related needs and to plan services accordingly. Students are encouraged to contact the office well in advance (6-12 months) of their planned entry date. Services requested in an untimely manner cannot be guaranteed and may result in a significant delay. Most services are provided to students at no cost; however, fee-based services such as personal assistance and out-of-class reader/writer assistance can be billed directly to students or sponsoring agencies.

University Center for International Education

The University Center for International Education (UCIE) offers a variety of services to international students and Wright State students interested in international education experiences. The UCIE works with the campus community to ensure an international dimension within the university’s three major functions of teaching, research, and service.

The UCIE assists international students and scholars before and during their stay at Wright State. Besides processing admissions and offering orientation to international students, the UCIE also assists with off-campus housing and with immigration regulations, advising, and record keeping. Re-entry counseling is available for international students returning to their home countries. International students can also participate in an off-campus host family program coordinated by the UCIE.

The UCIE provides opportunities for Wright State students to teach, research, and study abroad. Both American and international students can participate in these programs. Opportunities range from a three-week summer ambassador program in Japan or Brazil to a summer, semester, or year academic program in one of 16 countries around the world.
Veterans Affairs

Veterans who are eligible for education benefits through the Office of Veterans Affairs may contact Wright State's veterans affairs office for assistance in applying for benefits. The office also helps dependents, spouses, and children of deceased or completely disabled veterans who qualify for education benefits.

Student Health Services

Students who need attention for illnesses, injuries, wellness checkups, and physicals may see the nurse practitioner at 118 Frederick A. White Health Center. The nurse practitioner has prescriptive authority and is available for primary health care needs of the students on campus. There is also a physician available, by appointment, four hours per week. Those students who purchase the student insurance and are sick or injured will have their care covered by insurance. Students who have other insurance will be asked to pay a fee at the time of their visit. Documentation will be given to the student so that the student can submit the charges to his or her own insurance company. Student Health Services does not process claims to any other insurance other than student insurance. Lab fees and injections must be paid for at the time of service.

Student Legal Services

Student Legal Services is a private corporation on campus that provides limited legal services to Wright State University students for a minimal quarterly fee. Services provided include assistance in the areas of tenant/landlord issues, consumer and traffic cases, wills, simple dissolutions, name changes, and misdemeanor criminal and traffic cases. Student Legal Services may also provide limited advice in certain areas of the law such as personal injury, felony cases, estate and probate matters, and felonies. Students wishing additional information may learn more about Student Legal Services at www.wright.edu/students/legal/index.html or by calling (937) 775-5857.

Public Safety

Public Safety, the official law enforcement agency for the university, provides police services 24 hours a day. Among the services provided are personal safety escorts; a crime prevention unit, which provides educational programs that focus on the topics of crime awareness and prevention;

Center for Psychological Services

The Center for Psychological Services offers a variety of services to students who require assistance in coping with personal or emotional concerns. The center’s staff helps students learn to integrate their academic and personal lives through individual and group counseling. Counselors work with students who are experiencing test anxiety, fear of failure, depression, adjusting to college, changing values, uncertainty about their future plans, or who have a desire to learn more about themselves, including how to relate more effectively with others. All communications with counselors maintain the individual students’ confidentiality and privacy. Students who wish to discuss these or other personal concerns with a staff member may call for an appointment at (937) 775-3407. The center is open Monday through Friday, 8:30 a.m. to 5 p.m., and is located on the second floor of the Frederick A. White Health Center.

Career Services

Wright State offers a number of services to help students find temporary employment or further their search for career employment through Career Services. Students may avail themselves of individual career advising, a career resources center, student employment and career employment job fairs, Career Services’ web page, and interviewing opportunities. Academic courses are available that focus on career choices, career development, and changing from college to career employment. Students find temporary employment through both the Student Employment and Cooperative Education Programs. Through Cooperative Education/Internships, students gain practical, career-related experience that is essential in acquiring career employment upon graduation. Visit Career Services’ web page at http://career.wright.edu

Student Life 25
and an investigations unit. To increase safety within the campus community, emergency phones are located throughout the campus in buildings, parking lots, and other remote areas. These phones ring directly into the Public Safety Communications Center to ensure an immediate response to all potential emergency situations. The Public Safety Communications Center can be reached by dialing (937) 775-2111; or, in the event of an emergency, dial 911 from any campus phone.

**Campus and Transportation**

**Campus Shuttle Service**

Campus shuttle service is provided to remote Lot 20 and the Nutter Center from approximately 7:30 a.m. to 10 p.m. on Monday through Thursday and 7:30 a.m. to 6 p.m. on Friday, during fall, winter, and spring quarters.

**Permit Zones**

Commuter students may purchase a C parking permit to park in core campus lots. A remote parking permit is available for parking in Lot 20 and at the Nutter Center in Lots 7 and 8. Residence students are eligible to purchase a permit to park in the residence zones based on availability determined by Residence Services.

**Parking Meters**

Parking meters are located on University Boulevard and in Lot 11.

**Public Regional Transit**

The Miami Valley Regional Transit Authority (RTA) provides county-wide public transportation to residents of Montgomery County. Included as part of RTA’s service area is Wright State University’s main campus.

RTA Route number 13 provides year-round transportation between downtown Dayton and WSU, Monday through Saturday. Summer schedules may vary. For information, call 226-1144.

For complete information on campus parking permits, regulation, shuttle service and RTA schedules, contact Parking and Transportation, E138 Student Union, (937) 775-5690.

**Bolinga Black Cultural Resources Center**

Opened in 1971 as a tribute to Dr. Martin Luther King, Jr., the Bolinga Black Cultural Resources Center promotes cultural diversity through programs, activities, and forums that celebrate the African American experience. The center also provides academic and personal support to students. Individual counseling is available by scheduling appointments with Bolinga Center staff, and a number of student organizations such as Black Men on The Move, Black Women Striving Forward, and the McLin Scholars Association offer peer support.

**Women’s Center**

The Women’s Center serves as an information clearinghouse on women’s issues and services, fostering greater ties between women at Wright State and women in the community. The center promotes gender equity through educational programs and activities that honor the roles, contributions, and experiences of all women. The center also provides resource support for the Women’s Studies program and accommodates meetings, workshops, and other small group gatherings that address the concerns and interests of women on campus.

**Asian/Hispanic/Native American Center**

The Asian/Hispanic/Native American Center was created in October 1997 to support the academic, social, and cultural needs of Asian, Hispanic, and Native American students, faculty, and staff at the university. It also serves as an informational resource center regarding the Asian, Hispanic, Native American experience and creates an appreciation and understanding of the diverse Asian, Hispanic, and Native American cultures represented within the community. The center’s programs consist of guest speakers, workshops, film series, and celebrations of the Hispanic, Native American, and Asian Heritage Months.

**Facilities**

**Student Union**

The Wright State Student Union offers a place to play, relax, meet others, take care of academic needs, study, exercise, and grab a bite to eat, all in one stop. As the heart of the university life, the Student Union is committed to providing a safe gathering place that is friendly, student centered, and that promotes educational experiences among students, faculty, staff, alumni, and the community.

The professionally trained staff work closely with students to provide an opportunity for personal growth and recreation through a number of cultural, educational, and social experiences ranging from hired consultants, bands, classical concerts, intracampus competitions, and more. In addition to offering innovative programs, this 308,000 square-foot facility houses a fitness center, an
arcade, gymnasium, the University Bookstore, an art gallery, a credit union, student services, and more. The Student Union also provides a variety of dining options for students and other patrons. One venue, the Rathskellar pub, known for its authentic brick-oven pizza is also a popular hangout. Students may also purchase groceries, snacks, and other items at The Depot convenience store.

**Campus Housing**

Wright State offers residential communities housing over 3,000 students, with 11 residence halls for traditional-aged single students; 12 apartments for upperclass, single students; and three apartments for nontraditional and graduate students. The C.H.O.I.C.E. (Celebrating Healthy Options in the College Environment) residence program is offered to students desiring a substance-free environment. University Honors students can live in the Honors Residence Hall. The Hamilton Living-Learning Center focuses on academic success for first-year students, providing tutoring, workshops, and study groups based on general education courses. Campus Housing provides an environment and programs that advance the educational goals of resident students and Wright State University.

**Food Service**

Food service on campus is contracted with Sodexo Management Services. Sodexo offers a range of outlets from nationally recognized concepts such as Pizza Hut, Burger King, and Taco Bell to cafeteria-style service and gourmet catering. Also located on campus is the Depot convenience store and our own wood-fired “Brick House” pizza in the Rathskellar. A variety of quarterly food plans are available to residential and commuting students as well as to faculty and staff.

**Co-Curricular Activities**

**Campus Recreation**

The Wright State University Office of Campus Recreation is located in the Student Union, the heart of campus, and provides exceptional facilities and programs to promote the total health and well-being of each member of the university community. Professional staff work to meet the diverse needs of students, faculty, and university employees alike through activities and programs that promote healthy lifestyles, positive relationships, productive leadership, fair play, and of course—fun.

Recreational facilities consist of a fitness center, gymnasium, swimming pool, seven squash and racquetball courts, a spinning room, billiards room, game arcade, and outdoor playing fields. Students also have access to a second gymnasium, weight room, indoor running track, and outdoor tennis courts located just down the street at the Ervin J. Nutter Center.

Campus Recreation offers something for everyone from basketball to wallyball, table tennis to costume bowling, and a variety of adapted recreation sports from billiards to quad rugby. Students are encouraged to participate in the more than 20 intramural leagues, 22 sports clubs, and 25 special events and tournaments offered annually. For the outdoor enthusiast, Campus Recreation offers several camping trips, a ski trip, horseback riding, skydiving, in-line skating, and more.

Students may take advantage of a wide offering of noncredit fitness instruction from traditional cardiovascular workouts such as step, dance, or water aerobics, spinning and kick boxing, to more nontraditional holistic offerings in meditation, tai chi, and feng shui.

All sports and recreation are inclusive. If you require assistance or need reasonable adaptations to participate fully in any program please contact the Office of Campus Recreation at (937) 775-5815.

For a complete listing of activities and programs, visit our Web site at www.wright.edu/students/rec/.

**Sports**

The university offers a broad program of both intercollegiate and intramural sports for men and women. Wright State’s student-athletes compete in NCAA Division I and the Horizon League. Men’s and women’s sports opportunities include basketball, cross country, soccer, swimming, and tennis. In addition, the university offers baseball and golf for men, along with women’s softball, volleyball, and indoor/outdoor track.

**Music**

In addition to offering private lessons and academic programs in music, the Department of Music gives all students a chance to participate in instrumental and choral ensembles. These groups provide diverse opportunities ranging from jazz and gospel to classical tradition. Several of the ensembles require no audition.
Cultural Activities

The University Theatre presents eight major productions, numerous one-act plays, dance performances, and screenings of full-length and student films. The Theatre Department annually sponsors a Big Lens Festival of student films.

The University Art Galleries in the Creative Arts Center, run by the Department of Art and Art History, schedules six fine art exhibitions each year, which are free and open to the public. The Experimental Gallery, part of the same complex, houses frequently changing exhibitions of student art work.

The Union Activities Board (UAB), operated by students for students, schedules a wide variety of events including videos, guest speakers, comedy/novelty entertainment, concerts, recreational tournaments, cultural activities, and a highly regarded film series featuring foreign, cult classics, and avant garde films.

The University Artist Series brings internationally known performing artists to the campus throughout the year.

Organizations and Activities

Wright State has more than 100 registered student organizations including:

- Student Government
- Black Student Union
- Greek Council
- Union Activities Board
- Lambda Union
- National social sororities and fraternities
- The Guardian, student newspaper
- WWSU, student radio station
- Nexus, literary magazine
- Honorary groups
- Department clubs
- Religious clubs
- Special interest groups
- Sports clubs
- Leadership programs
- Peer 2 Peer Wellness Education

Academic Competitions

In addition to club and organizational activities, there are a variety of opportunities at Wright State for students to engage in academic competitions.

Model United Nations

WSU delegations to the annual National Collegiate Model U.N. Conference in New York City have the longest winning tradition of any U.S. university in the competition. Selected WSU students enroll in a political science seminar during winter quarter.

College of Engineering and Computer Science

The college Design Clinics offer student teams the opportunity to work on real-world, industry-sponsored projects or problems. The WSU Raider Lightning Electric Race Car provides invaluable hands-on research and development experience for undergraduate students who work as part of the race team in real-world competitions. Through the Engineering Leadership Institute Seminars, selected outstanding students who have demonstrated academic achievement, leadership skills, and personal commitment are provided with the opportunity to have candid dialogues with the area's top technical and community leaders.

Raj Soin College of Business

The Raj Soin College of Business sends students to an annual management accounting case competition sponsored by the Institute of Management Accountants.

Computer Science and Engineering

The Department of Computer Science and Engineering supports active student chapters of the IEEE Computer Society and the Association for Computing Machinery, which competes in the annual ACM Scholastic Programming Contest.

Chemistry

WSU's Chemistry Club competes in the American Chemical Society's national recognition of club activities.
ADMISSION, ADVISING, AND REGISTRATION
The process for becoming a new student at Wright State University involves several important steps. This section describes and explains these steps so that students can understand and follow the process and make informed decisions about services that might help in making decisions. A summary of services and offices discussed in this section is provided on page 45, along with phone numbers, to answer further questions.

Steps for Students New to Wright State:
1. Apply and complete admission application
2. Inquire about financial aid, if needed
3. Attend orientation program
4. Take placement tests
5. Meet with an advisor
6. Register for classes
7. Pay quarterly fees
8. Seek academic assistance

When students are admitted into an academic unit—be it University College, the Office of Adult and Transfer Services, an academic department, a college, or a school—they are advised by a professional advisor or faculty member in that academic unit. Specific information about advising will be provided in the student's letter of admission.

Admission

Ohio students who have graduated from a state chartered high school and completed the recommended college preparatory curriculum are eligible to apply for unconditional admission. Out-of-state students, however, must present evidence of above average ability to do college work. Students who do not meet the above criteria will be reviewed on an individual basis. Based upon the review of a completed admission file, the applicant may be offered unconditional or conditional admission to the university. Some applicants who do not meet the requirements may have their admission deferred pending satisfactory completion of developmental or remedial courses.

Admission to the university does not automatically guarantee admission to a major program of study; major programs of study have specific entrance requirements that must be met.

High School Preparation

Wright State has adopted a college preparatory curriculum policy. The university requires applicants to have a high school record that meets the recommendations of the Advisory Commission on Articulation between Secondary Education and Ohio Colleges. Students who do not meet the high school course requirements may be admitted to the university with conditions and will be required to remove deficiencies before they can graduate from Wright State University.

The following table summarizes the college preparatory course requirements and indicates how deficiencies may be removed.

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Requirement</th>
<th>Removal of Deficiencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>four units</td>
<td>Pass ENG 101*</td>
</tr>
<tr>
<td>Mathematics</td>
<td>three units (including Algebra I and II)</td>
<td>Pass MTH 127*</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>three units (including two units in history)</td>
<td>Complete the general education requirement in Western Civilization. A one-term course removes up to one unit of deficiency.</td>
</tr>
<tr>
<td>Science</td>
<td>three units</td>
<td>Complete the general education requirement in natural sciences. A one-term lecture/lab course removes up to one unit of deficiency.</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>two units (in the same foreign or classical language through level II)</td>
<td>Pass courses through the 103 level or demonstrate proficiency by examination.</td>
</tr>
<tr>
<td>Arts</td>
<td>one unit</td>
<td>Complete the general education requirement in Fine and Performing Arts.</td>
</tr>
</tbody>
</table>

* Initial enrollment in English and mathematics courses will be determined by placement testing. See the section on Placement Testing on page 35.
† Algebra I and Foreign Language I may be taken in eighth grade.

Degree-Seeking Students

Beginning Freshmen

Students beginning college with the intention of earning a degree must submit the following to be considered for admission:
1. Undergraduate application
2. $30 nonrefundable application fee
3. High school transcript (partial one at time of application, final one at end of senior year) or official GED scores.
4. College Preparatory Curriculum Completion Form
5. Official ACT or SAT scores.
Transfer Students

Students who have registered for 12 or more quarter hours at another college are considered transfer students. To be considered for admission as a transfer student, students must submit the following:

1. Undergraduate application
2. $30 nonrefundable application fee
3. Official transcript from each college previously attended
4. High school transcript (required of the following students)
   • High school graduates of 1986 or before who are transferring with less than 12 quarter (nine semester) hours
   • High school graduates of 1987 or after who are transferring with less than 45 quarter (30 semester) hours
5. College Preparatory Curriculum Completion Form (required of the following students)
   • High school graduates of 1996 or after who are transferring with less than 45 quarter (30 semester) hours
6. College Prep Curriculum Completion Form (required of the following students)

All transfer students with at least a “C” average are eligible for admission to the university; admission to most colleges and schools requires a higher GPA. Students who have been out of college for more than five years with less than a 2.0 GPA do not have to petition to transfer to Wright State. However, those students who have attended college within the past five years with less than a 2.0 GPA must petition for admission. The petition forms are available in the Office of Undergraduate Admissions and must be submitted along with the other necessary applications materials outlined above. Students who have been dismissed from another institution will not be considered for admission to Wright State for one calendar year.

Students who have been granted “fresh start” or “academic bankruptcy” at another institution must have earned a minimum of 12 hours at the same institution before Wright State will recognize the recalculated GPA for admission purposes.

Transfer Credit Regulations

1. Students’ credits must have been earned at an institution that is regionally accredited, or an institution of equivalent quality (as determined by Wright State).
2. Students must have earned a grade of “C” or higher (according to the definition of grades currently used at Wright State). Grades of “pass” and “credit” are considered for transfer credit.
3. The credits must have been acceptable for satisfying the graduation requirements at the source institution.
4. Any credit earned through correspondence study or as a part of an off-campus study program are subject to the same regulations as other transfer credit.
5. If the credits were earned more than 10 years before a student’s admission to Wright State, the student’s advisor will determine if the credits are still applicable to the degree.
6. Students who have completed three-fourths or more of the Wright State quarter credit hour requirement for a course or sequence may receive credit for that course or sequence. For example, two three-credit hour courses in English composition may be considered the equivalent of ENG 101 and 102 (8 credit hours).
7. Wright State academic advisors will determine how students’ transfer credits are to be used toward the requirements for their major. If there are exceptions to the transfer credit rules, the dean of the major college or school involved will make the decision.
8. The Office of Undergraduate Admissions will notify students of their admission to Adult and Transfer Services, University College’s Academic Advising Center, or the appropriate college.
9. General education requirements for most transfer students will be determined by a course-by-course evaluation.
10. The university will accept a minimum of 90 credit hours for an associate degree from a regionally accredited junior or community college (see Transfer Credit Regulation number 1). Also, credit is usually given for all academic college credit hours above 90 for which a grade of “C” or better has been earned.
11. Students who have already received a baccalaureate degree from an accredited institution (see Transfer Credit Regulation number 1) and wish to pursue a second baccalaureate degree will automatically receive 138 quarter credit hours. They will be ranked as seniors. An advisor will determine how many credits these students will have to complete to receive their second degree.
12. All religion courses taught by a religion department in any state college or university will be considered for transfer credit. These courses are subject to other applicable Transfer Credit Regulations. Religion courses taught by all other colleges must be approved by the religion department before transfer credit is granted.
13. Transfer students with a minimum GPA of 3.4 or higher may be eligible to graduate with Latin honors (summa cum laude, magna cum laude, or cum laude). For the purpose of determining honors, the student’s GPA at Wright State will
be recalculated to include all transfer grades. This recalculation of the GPA may result in the loss of honors status at graduation.

Transfer to an Ohio Public College or University

The Ohio Board of Regents, following the directive of the Ohio General Assembly, developed a statewide policy to facilitate students' ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to an independent institution are encouraged to check with the college or university of their choice regarding transfer agreements.

The Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a subset or entire set of a college or university's general education program. The Transfer Module consists of 34 to 60 quarter hours (or 36 to 40 semester hours) of courses in the following areas: English, mathematics, arts and humanities, social and behavioral sciences, natural and physical sciences, and interdisciplinary study.

The Transfer Module completed at one college or university will automatically meet the requirements of the Transfer Module at another college or university. Students may be required, however, to meet additional general education requirements at the institution to which they transfer. For example, a student who completes the Transfer Module at Sinclair Community College and then transfers to Wright State University is said to have completed the Transfer Module portion of the university's general education program and will only need to complete one non-Western studies course to complete the general education requirements at Wright State.

Since many degree programs require specific courses that may be taken as a part of the general education or Transfer Module program at an institution, students are encouraged to meet early in their academic career with an academic advisor at the institution to which they plan to transfer. For example, students who will be majoring in any of the majors in the College of Business and Administration at Wright State University should take EC 201, 202, and 203 (or equivalent courses at another institution) rather than the EC 200 course listed as a part of the Transfer Module. Because of specific major requirements such as these, early identification of a student's intended major is encouraged. Advisors at the institution to which a student wishes to transfer should be consulted regarding Transfer Module and general education courses and any specific program requirements that can be completed before transfer.

Conditions for Transfer Admission

Students meeting the requirements of the Transfer Module are subject to the following conditions:

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module and either the Associate of Arts or Associate of Science degrees. These students will be able to transfer all courses in which they received a passing grade of D or better. Students must have an overall GPA of 2.0 to be given credit for the Transfer Module.

2. The policy also encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module with a grade of "C" or better in each course and 90 quarter hours or 60 semester hours. Students must have an overall GPA of 2.0 to be given credit for the Transfer Module, and only courses in which a "C" or better has been earned will transfer.

3. The policy encourages receiving institutions to admit on a nonpreferential consideration basis students who complete the Transfer Module with a grade of "C" or better in each course and less than 90 quarter hours or 60 semester hours. These students will be able to transfer all courses in which they received a grade of "C" or better.

Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at that institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as all other students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

Appeals Process

A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and of the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state-level Articulation and Transfer Appeals Review Committee.

The Appeals Review Committee shall review and recommend to institutions the resolution of individual cases of appeal from transfer students who have exhausted all local appeal mechanisms concerning applicability of transfer credits at receiving institutions.
Responsibilities of Students

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution’s major. Students are encouraged to seek further information regarding transfer from both their advisor and from the college or university to which they plan to transfer.

Wright State University’s Transfer Module

Wright State’s Transfer Module consists of 54 credit hours of introductory courses in English, mathematics, arts and humanities, social and behavioral sciences, and natural and physical sciences. The general education requirements for a bachelor’s degree require 57 credit hours, which include the Transfer Module and one additional course as listed below. Since certain majors at Wright State require approved course or sequence substitutions to the courses listed below, students should consult the specific degree requirements listed in this catalog.

<table>
<thead>
<tr>
<th>Transfer Module</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong></td>
</tr>
<tr>
<td>Composition</td>
</tr>
<tr>
<td>8 credits</td>
</tr>
<tr>
<td><strong>Mathematics</strong></td>
</tr>
<tr>
<td>3 credits</td>
</tr>
<tr>
<td>**Arts/</td>
</tr>
<tr>
<td>Humanities**</td>
</tr>
<tr>
<td>15 credits</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>**Social and</td>
</tr>
<tr>
<td>Behavioral**</td>
</tr>
<tr>
<td>16 credits</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>**Natural and</td>
</tr>
<tr>
<td>Physical**</td>
</tr>
<tr>
<td>12 credits</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**To Complete General Education Requirements**

| Choose one: |
| CST 220-3 |
| CST 230-3 |
| CST 240-3 |
| CST 250-3 |
| CSE 250-3 |
International Students

Wright State welcomes applications from qualified international applicants. Over 450 students on F-1 and J-1 student visas currently attend the university. Application materials are available at the University Center for International Education. Applications for admission must be completed three months before the quarter in which applicants wish to begin studies at Wright State.

International applicants are expected to meet the following criteria for admission:

1. Undergraduate applicants must have an educational background that is equivalent to a high school diploma from the state of Ohio.

2. All international applicants must demonstrate proficiency in English. For applicants whose native language is not English, the Test of English as a Foreign Language (TOEFL) is required; a minimum score of 500/173 is required for admission. The College of Engineering and Computer Science requires a score of 530/197. Nonnative English-speaking students will also be tested in English upon arrival at Wright State and are required to enroll in appropriate English courses if the testing so indicates.

3. Since there is no financial assistance available for undergraduate international students, the university must be assured that all international applicants have adequate financial resources to attend Wright State. International students, once admitted, may be required to deposit with the university a full year's tuition before they will be sent a student visa form.

4. Transfer students must also present evidence of above-average ability to do college work. All first-year international students are required to take the reading, writing, and mathematics placement examinations before enrolling for their first quarter of classes. Students should contact the University College for further placement testing information.

Returning Students

Students who have not attended Wright State for four or more consecutive quarters must apply for readmission through the Office of Undergraduate Admissions. There is no additional application fee, and official transcripts are required only from the schools students have attended since they left Wright State.

Students who have been dismissed may apply for readmission by petition after they have remained out of school for four quarters; see the section on readmission on page 52.

Students who have not attended Wright State for five years (20 consecutive quarters) may wish to take advantage of the Fresh Start Rule. This rule may allow students to have their earlier GPA recalculated. Interested students should contact the Office of Undergraduate Admissions for more information.

Other Admission and Enrollment Categories

Nondegree Undergraduate Students

Students who wish to take courses at Wright State, but who do not intend to work toward a degree at this time can register as nondegree students. Students may take as many courses as they like, as long as they meet the requirements for each course. To be eligible to register as nondegree students, they must have graduated from an accredited high school or passed a high school equivalency test (GED).

To apply, students need only fill out a simple application/registration form and pay a $10 one-time registration fee. Later, if they decide to enter a degree program, they can file their credentials and pay an additional $20 application fee. Non-degree work normally can be applied toward a degree program.

Nondegree students may receive academic advising from the Academic Advising Center and may participate in any of the services of the division, including tutoring and developmental education courses.

Teacher Certification/Licensure Candidates

College graduates who wish to become licensed teachers must apply for admission, file all the necessary credentials, pay the application fee, and complete the college admissions process as described on page 71. Those interested in certification/licensure should also see the Special Program Note on page 71.
Orientation

The new student orientation program at Wright State is designed to help students make a successful transition to university life. All first-year students under the age of 23 with no previous college experience attend a comprehensive program to prepare them for fall quarter.

During orientation, students and their parents are introduced to the university and learn about its resources. Students receive academic advising, choose a learning community, and register for fall quarter as part of the orientation process. They also meet other students, experience university life, and discuss contemporary campus issues relating to student life. Ninety percent of first-year students attend summer orientation. Transfer and new students who do not attend orientation are introduced to campus resources and procedures through WSU 101, a Web site.

Placement Testing

New students must complete appropriate testing before scheduling an academic advising appointment to prepare for course registration. (Note: Students under the age of 23 who attend summer orientation will undergo testing and registration as part of the summer orientation process.) Directions for academic advising and registration will be given at the placement testing session. The University College conducts placement testing in mathematics, reading, and writing for undergraduate students who are new to the university.

Mathematics Placement Testing

All students (new, transfer, and continuing), without credit for a college math course are required to take the math placement test. Appropriate course enrollment is then determined based on these scores.

Transfer students who have earned college credit in mathematics at a grade of "C" or above do not need to take the exam. In addition, students transferring from Clark State, Edison State, or Sinclair Community College who have completed all required developmental mathematics courses need not take the math placement exam.

Reading and Writing Placement Testing

All students preparing for their first English composition course in higher education are also required to take reading and writing placement examinations.

Transfer students who have earned college credit in English composition at a grade of "C" or above need not complete the writing placement. In addition, transfer students from Clark State, Edison State, and Sinclair Community College who have satisfactorily completed all required developmental reading and writing courses need not take the exams.

Writing—Students enter Wright State with very different abilities in English. To give every student the best possible instruction in writing, several courses have been developed, ranging from Honors sections of English 101 to DEV 072, 082, and 092, which are additive credit courses for students needing more extensive instruction in writing than the two-quarter ENG 101/102 sequence can provide. The placement procedure exists so that students can be given the instruction most appropriate for their writing abilities upon entering the university.

Reading—In order to meet the reading demands of the general education curriculum, it is imperative that students be given an opportunity to remove deficiencies in their skills. Courses have been developed—DEV 071, 081, 091—to give every student the best possible instruction in reading. The placement procedure exists to give students the instruction most appropriate for their reading abilities upon entering the university.

For more information about placement testing, students should contact the University College.
Advising

Academic advisors help students select courses, schedule classes, become oriented to the university, and develop academic success strategies. During advising, students are given information about appropriate academic services, such as tutoring or Developmental Education courses, and referrals to offices that provide specialized support, such as for disabled students. Honors students, or students age 25 or older. In addition, University College's Academic Advising Center and Adult and Transfer Services advisors help degree-seeking students focus on their university general education requirements and fulfill the admission requirements of their selected majors. Once admitted to their colleges, students are supported by college and department advisors.

New Students Enrolling for Fall Quarter

New Student Orientation Program
First year students under the age of 23 with no previous college experience who are enrolling for fall quarter attend the New Student Orientation Program, which helps students make a successful transition to college life. During orientation, students receive academic advising from an advisor in the University College, choose a learning community, and register for fall classes. The program is held in June and July on campus, and students may stay overnight in university housing. Orientation includes sessions concerning various aspects of college life.

New Student Group Advising
Students who do not attend the New Student Orientation Program will visit campus twice, once to take their placement tests, and a second time for New Student Group Advising in August or early September (exceptions can be made for those living a great distance from campus). During the two- to three-hour group advising session, students will receive academic information from a University College Academic Advising Center advisor and register for their fall classes.

New Students Enrolling for Other Quarters
All new students beginning winter, spring, or summer quarters will follow the procedures outlined under New Student Group Advising as stated above: take placement tests one day and then return later for group advising and registration.

Adult and Transfer Students
The Office of Adult and Transfer Services provides a starting place for those 23 and older who are beginning or reentering college and for students transferring into Wright State University. The office's services introduce students to the university system and provide information, support, and referral resources.

Adult and Transfer Services staff assist students age 23 or older who are returning to the university to complete a degree, begin a degree, or plan a career change. The services include academic and career exploration, referral to university and community services, and support in managing change.

Transfer students follow the procedures of the academic unit to which they are assigned upon admission to the university. Students who have a declared major, and have already met the admission requirements to enter the school or college that houses that major, will meet with their faculty or staff advisor after completing any required placement tests.

Transfer students who are undecided, or who have not yet met the admission requirements for their majors, are assigned to the University College's Office of Adult and Transfer Services. In either case, after placement tests (if required), transfer students meet with their assigned advisors for academic information in preparation for registration.

Financial Aid
The Office of Financial Aid makes every effort to help students who would be unable to attend school without receiving some form of financial aid. No student interested in attending Wright State University should fail to apply because of financial limitations. If necessary, students should meet with a financial aid staff member to discuss any questions or concerns they may have regarding a financial aid package.

Financial aid, with the exception of four-year scholarships, is granted on a three-quarter basis. To also help determine summer and/or academic year financial aid requires completion of the registration questions on the Free Application for Federal Student Aid (FAFSA). The registration questions will require you to indicate the quarter(s) you plan to attend, and if you will register for full, three-fourths, or part-time. All students must apply for financial aid on a yearly basis. All students who are interested in applying for need-based financial aid are required to submit the Free Application for Federal Student Aid (FAFSA). The FAFSA form can also be filed electronically using FAFSA on the Web.
FAFSA on the Web is currently available through the Office of Financial Aid. FAFSA on the Web allows students to file the FAFSA via the internet at the following address: http://www.fafsa.ed.gov/. Students must have a PC and modem for home use for FAFSA on the Web.

Application deadlines for the following programs vary, so it is essential that individuals contact the Office of Financial Aid for specific dates and additional details.

Scholarships

Wright State University’s undergraduate scholarship program is committed to rewarding academic excellence by recognizing students who have demonstrated high academic ability, involvement in extracurricular activities, and creative talent. First-year student undergraduate scholarships are awarded in three categories: academic performance, competitive, and talent. Scholarships range from $100 to $10,500 a year, and most are renewable. For scholarship details visit Wright State’s Web site at http://www.wright.edu/financialaid.

Academic Performance Scholarships

Academic Performance Scholarships are awarded to National Merit finalists, semifinalists, and commended scholars; National Achievement and Hispanic finalists, semifinalists, and commended scholars; valedictorians and salutatorians; and scholarships based on ACT/SAT scores, class rank, and high school GPA. The Wright State University Admissions Application is used to apply. Deadline date is March 1.

Competitive Honors Scholarships

Competitive Honors Scholarships are awarded through a scholarship application process. Students who apply are selected based on their ACT/SAT scores, class rank, high school GPA, letters of recommendation, extracurricular activities, and often times, an interview. Student must have applied for admission to Wright State and have completed the scholarship application requirements by the deadline date of January 15.

Talent Scholarships

Talent Scholarships are awarded through an application and audition process to students who demonstrate outstanding talent in theatre arts and music. For specific scholarship information, please contact the appropriate department.

Transfer Students

Transfer Students can apply for scholarships by completing the Transfer Student Scholarship application. Transfer Competitive Scholarships have a March 1 deadline, while Transfer Associate Degree Scholarships have a June 15 deadline.

First-year student and Transfer Student Scholarship applications are available through the Office of Admissions, the financial aid Web site, or through the Office of Financial Aid.

Scholarships for Continuing Undergraduate Students

Continuing students who have demonstrated strong academic achievement at Wright State may apply for scholarships supported by the Wright State University Foundation and the Campus Scholarship Campaign. Continuing undergraduate students may apply for scholarships if they have established a minimum GPA of 3.4, with at least 45 credit hours earned at Wright State. Applicants compete for these scholarships with other scholarship applicants who are enrolled in their own college or department, and are selected by a committee composed of faculty members in their college or department. Scholarships range from $100 to $9,500 and are awarded for one year.

Applications for continuing undergraduate scholarships are available through the Office of Financial Aid at Wright State in January or through the financial aid Web site. The filing deadline is March 1.

If a scholarship is based on financial need, the student must file the Free Application for Federal Student Aid (FAFSA) by March 1. Applications for scholarships supported by local industries, foundations, and agencies should be obtained directly from those organizations. Students can also access information about outside scholarships through the Internet. The following Web site links to four FREE scholarship searches: http://www.finaid.org.

The following scholarships are available to Wright State students through the generosity of many individuals, organizations, and foundations. These scholarships are available to students who meet specific criteria.
**Raj Soin College of Business**

Accountancy Alumni Scholarship  
Accountancy Board Scholarship  
American Business Club  
Bank One Lending Hands Education Grant  
James W. Blain Accountancy Scholarship  
Dr. Sonia Brecha Memorial Scholarship  
Roger Brucker Scholarship  
Business Alumni Scholarship  
Business and Administration Scholarship  
Dean Investment Scholarship  
Deloitte & Touche LLP Scholarship  
Economics Scholarship  
The Fifth Third Bank Scholarship  
Financial Service Scholarship  
F.I.R.E. Scholarship  
David S. Gutridge Business Scholarship  
Daniel J. Kaufman Memorial Scholarship  
The Thomas E. Kreusch Scholarship  
Rishi Kumar Student Scholarship Fund  
The Howard L. Magner Accountancy Scholarship  
Management Department Scholarship  
Management Science/Information Systems Scholarship  
Marketing Scholarship  
The Steve Mason Business Scholarship  
The Donald F. Pabst Scholarship  
Jacob P. Paperman Award  
The Peggy Rike Scholarship  
Robbins & Myers Scholarship  
Rust/Cheri Gray Memorial Fund  
Scitex Scholarship  
The JoAnn Self Memorial Scholarship  
Shumsky Enterprises Scholarship  
Brian Skelton Scholarship  
The Barbara Kirk Stickney Scholarship  
The Sharon K. Sutton Scholarship  
Sweeney Family Scholarship Fund  
WSU Finance Club Scholarship  

**College of Engineering and Computer Science**

AFCEA (Armed Forces Communications and Electronics Association) Scholarship—Dayton/Wright  
Adams-Robinson Construction Company Endowed Scholarship (Wright STEPP)  
Amcast Industrial Engineering Scholarship  
Robert C. Appenzeller Endowed Scholarship in Engineering  
John A. Becker Electric Company Scholarship  
John H. Birden and Kenneth C. Jordan EG&G Mound Scholarship  
Lester and Delilah Buechler Scholarship  
Anthony J. Cacioppo, Ph.D. Memorial Scholarship  
Computer Science, Engineering, and Mathematics Scholarship (CSEM)  
Virginia Arlene DiFlora Memorial Scholarship  
Durron Foundation Scholarship (Wright STEPP)  
Daniel W. Duval—Robbins & Myers Endowed Scholarship  
Edgerton EG&G Endowed Scholarship  
Electrical Manufacturing and Coil Winding Association Scholarship  
Gasper Corporation Endowed Scholarship in Computer Science  
Hearst Foundation Scholarship (Wright STEPP)  
Cary Michael Jokela Memorial Scholarship  
Dan Graves Association of Old Crows Kittyhawk Chapter Scholarship  
Lockheed Martin Scholarship  
Modern Industrial Plastics Mechanical and Materials Engineering Scholarship  
Harry W. Moore Memorial Scholarship  
Mosier Scholarship  
Heinz P. Murka Scholarship  
Ervin J. Nutter Endowed Scholarship  
Robbins & Myers Endowed Scholarship  
SAE Engineering Scholarship  
Scitex Endowed Scholarship  
Standard Register Scholarship (Wright STEPP)  
Supply One Corporation Scholarship  
William F. Wahlert Memorial Fund Scholarship  
Isaac Weiss Memorial Scholarship  
Charles F. and Dorothy E. Wittlinger/Dayton View Optimist Club Endowed Scholarship  
Departmental Scholarships  

**College of Education and Human Services**

The David M. Berry Memorial Scholarship  
Department of Teacher Education Scholarship  
Early Childhood Education Scholarship  
Education and Human Services Scholarship  
The Betty Hathaway Scholarship  
Catherine Mauer Haverstock Scholarship  
HPR Scholarship  
Rehabilitation Counseling Scholarship  
The Ellen Scherer Scholarship  
Special Education Scholarship  
WOEA Teacher Scholarship
College of Liberal Arts

Art Scholarship
Arts Gala Scholarship
Augsburg/Estevez Scholarship
Bassett-Woodwind Scholarship
The Richard J. Blazer Memorial Scholarship
Classics Scholarship
Carol H. Cline Scholarship
Communications Alumni Scholarship
Cheryl Craigie and John Britt Endowed Scholarship
J. Rodriguez Dance Scholarship
Donald David Memorial Scholarship
Harry N. Davis Memorial Scholarship
Dayton Ballet Scholarship
Harry G. and Martha B. Ebeling Scholarship
ELM Art Scholarship
English Scholarship
Harley Flack Memorial Piano Scholarship
Clark Haines Music Award
Val Hattemer Scholarships
Ronald F. Hough Scholarship
Hungarian Ancestry Scholarship
The Paul Katz Chamber Orchestra Scholarship
The Gerald and Rita Kurdilla Scholarship
Liberal Arts Scholarship
The Gary M. McDaniel Memorial Scholarship
Mead Urban Affairs Scholarship
Modern Languages Scholarship
Music Scholarship
Park Hills Viking Scholarship
Political Science Scholarship
President’s Chamber Orchestra Scholarship
President’s Scholarship for Musical Theatre and Dance
Rising Star Scholarship
Singer Scholarship
Brian Skelton Scholarship
Social Work Scholarship
Sociology/Anthropology Scholarship
Robert M. Stover Memorial Music Award
Sucher Chamber Orchestra Scholarship
Theatre Alumni Scholarship
Theatre Talent Scholarship
The Ellen Wiedemann-Berger Memorial Award
WTUE Scholarship/Sandy Patton Scholarship

College of Science and Mathematics

The Dr. Merrill L. Andrews Memorial Scholarship
Howard E. Bales Memorial Scholarship
Biological Sciences Scholarship
Biological Chemistry Scholarship
The Michael A. Bruck Memorial Scholarship
Chemistry Scholarship
The Cargill Chemistry Scholarships
The Robert G. Chollar Memorial Scholarship
Dr. Jean T. and Phyllis Nussey Dubois Memorial Scholarship
Geological Sciences Scholarship
The Edgar Hardy Ph.D. Chemistry Scholarship
David Karl Memorial Scholarship
Kittyhawk Scholarship
The Nicholas Koussa Memorial Scholarship
The Ervin B. Lacy II Memorial Scholarship
Mathematics Scholarship
Ohio Wildlife Federation and League of Ohio Sportsmen
Physics Scholarship
Psychology Scholarship
John D. and Helen V. Rossmiller Scholarship
Science Apprenticeship Scholarship
Science and Math Scholarship
WSU State Science Day Scholarship

College of Nursing and Health

The Elta Smith Biles Memorial Scholarship Fund
College of Nursing Scholarship
Dayton Association of Orthopedic Nurses Scholarship
Ethnic Diversity in Nursing Scholarship
Montgomery County Medical Society Auxiliary Scholarships
The Lois F. Renner Lucero Memorial Scholarship
Jane Swart Memorial Scholarship
Undergraduate Nursing Student Scholarship
Annual Essay Competition
The Sondra K. Zinser Nursing Scholarship
Miscellaneous Scholarships

- Alumni Association Legacy Scholarship
- Air Force ROTC Scholarships
- Army ROTC Scholarships
- Athletic Scholarships
- Baldwin-Whitney Scholarship
- Beavercreek Scholarship
- Betty (B.A.M.) Scholarship
- Beta Phi Omega Scholarship
- Bolinga Cultural Resources Center Scholarship
- Campus Recreation Disability Scholarship
- Centerville Women’s Civic Club Scholarship
- Distinguished Senior Honors Awards
- Domino’s Pizza Scholarship
- The Emrick Scholarship Fund
- Fairborn Lioness Club Scholarship
- The Susan/Jerome Fetsko Scholarship
- Harley E. Flack, Ph.D. Memorial Scholarship
- Hanselmann Memorial Scholarship
- Norman K. Hanselmann Memorial Scholarship
- Sarah Harris Scholarship
- Dorothy Ward Hayes Scholarship
- Heritage Scholarship
- The Charles H. Hewitt Scholarship Fund
- Harry Jeffrey Scholarship
- The Allen Jones Scholarship
- The Dwight Kemp Scholarship
- KeyBank Scholarship
- M. L. King Scholarship
- Lake Campus Transfer Scholarships
- The George W. Lucas Scholarship
- Male Mentoring Scholarship
- C. J. McLin Scholarships
- The Capt. Kevin M. McGuire Memorial Scholarship
- Minority Disability Scholarship
- Naum Scholarship
- The Robert Oelmann Scholarship
- Office of Disability Services Scholarship
- Ohio Lions Foundation Helen Keller Scholarship
- Out-of-State Scholarships
- Parent Association Scholarship
- Presidential Scholarship
- Rike Family Foundation Scholarships
- The Frank L. Salsburg Memorial Honors Scholarship
- The Truman O. Schardt Memorial Scholarship
- The Oma K. Sells Honors Scholarships
- The Daisy A. Shellhouse Scholarship
- The Michael Small Memorial Scholarship
- Student Union Scholarships
- University Trustees Scholarship
- Volsporting Scholarship
- Mildred Waddell Scholarship
- Fred White Prize
- The Frederick A. White Scholarship
- Robert H. Whited Scholarship (Dayton Exchange Club)
- Woods Scholarship
- WOW Scholarship
- WSU Girl Scout Scholarship
- WSU Foundation Scholarships
- YES Scholarship

Grants

Grants are forms of gift aid that are not repaid. They are available to undergraduate students and are based on financial need. The Ohio Instructional Grant is available to students who are residents of the state of Ohio and attend college full time. Students who are eligible for the Ohio Instructional Grant, but will be attending part time, will receive their eligibility through the Ohio Part-time Student Instructional Grant program. Students must apply through the Free Application for Federal Student Aid (FAFSA).

To be considered for the Pell Grant and the Supplemental Educational Opportunity Grant, students must complete and submit the Free Application for Federal Student Aid (FAFSA).

Priority Consideration

To receive priority consideration for the Federal Supplemental Grant, Perkins Loan, Nursing Loan, and/or Work-Study, students must demonstrate exceptional financial need on the basis of the Free Application for Federal Student Aid (FAFSA). The FAFSA is first mailed to the Federal Processing Center on or before March 1 with Wright State listed to receive the processed data.

Loans

Loans, which are repaid starting six months or nine months after graduation or termination of half-time (six hours) studies, are available to both undergraduate and graduate students. For information on applying for the low interest (5 percent) Perkins Loan (formerly the National Direct Student Loan), refer to the paragraph on priority consideration.

Students apply for the Subsidized and Unsubsidized Stafford Student Loan (variable interest not exceeding 8.25 percent) by completing the Free Application for Federal Student Aid (FAFSA).

Students who are officially admitted to the Wright State-Miami Valley College of Nursing and Health are eligible to apply for the Federal Nursing Student Loan. The Federal Nursing Student Loan has a five percent interest rate, and repayment begins nine months after graduation or termination of half-time (six hours) nursing studies. For information on applying for the Federal Nursing Student Loan, refer to the paragraph on priority consideration.


**Student Employment**

Student employment is available to students who wish to work to help finance their education or just to earn extra spending money. Students can obtain information about job opportunities through Career Services. For on-campus jobs, students may be employed through the Federal Work-Study Program or the regular employment program. For information on applying for Federal Work-Study, refer to the paragraph on priority consideration. There are no financial eligibility requirements for students who wish to work under the regular employment program. Students may also be employed off-campus.

**Veterans’ Benefits**

Active duty personnel and Vietnam-era veterans are eligible for the new G.I. Bill if they served without a break in service after October 19, 1984, through June 30, 1985. Only veterans separating after June 30, 1988, are eligible. Eligibility terminates 10 years from date of separation from active duty.

The Veterans’ Educational Assistance Program (VEAP) can be used by a veteran who entered active military service after December 31, 1976, served for a continuous period of 181 days or more, and contributed to VEAP while on active duty.

The All-Volunteer Force Educational Assistance Program (New G.I. Bill) can be used by a veteran who entered on active duty at any time after June 30, 1985, and paid into the program.

Applications are available from the Veterans Affairs office at Wright State University or from any Department of Veteran Affairs office. Educational opportunities are available for children and surviving spouses of veterans whose deaths or permanent total disabilities were service-connected. Spouses and children of servicemen and women declared missing in action or prisoners of war are also eligible.

Tutorial assistance is available to students who are receiving education benefits. Assistance is given to vocational rehabilitation students according to need, while benefits are limited to a maximum of $100 per month for other students.

**Registration**

After new students have met with their advisor, they are ready to register for classes. Registration information and dates are announced in the quarterly schedule of classes and online at http://www.wright.edu/admissions/registration. Once students have advisor approval (if required), they may register through the Raider Express Telephone Registration system using a touch-tone phone or in person at the windows of the Office of the Registrar. Continuing students should check the quarterly class schedule for the specific date they may begin to register.

Currently registered students and students who are not currently registered, but who have been registered anytime during the previous year, will be mailed a registration information form. This form will be mailed to the local address on file in the student database.

**Registration for Writing Intensive (WI) Courses**

As explained on pages 48 and 54, students must complete eight writing intensive (WI) courses as part of the WAC requirement. Each WI course is clearly identified in the quarterly class schedule. Students registering for a WI course are automatically registered for the writing component of the course, a “0” credit hour lab. Students may not drop a WI course and lab separately.

**Paying Fees**

A current fee schedule can be found on-line at http://www.wright.edu/admissions/bursar/. The procedures for paying fees depend on which registration period is used. Students will find fee payment deadlines for each registration period in the university calendar, published in the quarterly schedule of classes. Students who register early but do not submit their payment by the required due date will have their registration canceled in order to make classroom space available to other students. Students who register during open registration must pay all fees and charges by the published fee payment deadline. Their registration will not be canceled. Late fees may be assessed for late registration or late payment. See the quarterly class schedule for refund and drop/withdrawal dates.
Academic Assistance Services

Developmental Education

The office of Developmental Education offers skill-building courses in reading improvement, basic writing, fundamental English, and basic mathematics. Appropriate placement into nearly all of these courses is determined by the scores obtained from the university-administered placement tests. Also offered are study strategies for students who need improvement before taking college-level courses. Students taking basic writing and fundamental English or reading improvement courses are scheduled to spend at least one hour per week in the writing and reading centers.

In addition to reading, writing, and basic math, students are encouraged to enroll in College Study Strategies and the First-Year Student Seminar. One non-graduation credit hour is earned for the strategies course and two hours of graduation credit for the seminar. For each of the other skill-building courses, three to six hours of non-graduation credit can be earned.

Tutoring Services

The Tutoring Office strives to locate a tutor for any course offered at the university in which a student may be experiencing difficulty. Students can sign up for tutoring not only to pass a course, but also to improve their grade in a course. Initial application for placement with a tutor should be made in person at the Tutoring Office. Veterans and students supported by the Bureau of Vocational Rehabilitation may be able to be reimbursed for their tutoring expenses. The office will also direct students to “help rooms” provided by various departments, where walk-in tutoring is available.

The Tutoring Office also coordinates a Supplemental Instruction Program in conjunction with specific General Education classes. For classes with a Supplemental Instruction component, students can attend free weekly study sessions. Information on which specific classes offer Supplemental Instruction can be obtained from the Academic Advising Center or the Tutoring Office.

Writing Assistance

The University Writing Center provides free writing consultation. Undergraduate and graduate students are available to help students with every stage of the writing process and with assignments. Students may also receive help using one of the center’s 13 networked computers.

The Writing Center also offers individual workshops each quarter. These specialized workshops offer review of grammar and punctuation, research formats, and essay exam preparation. The center also maintains a Writer’s Hotline for students and staff.

Learning English for Academic and Professional Purposes (LEAP)

For non-native speakers of English wishing to study at an American college or university, Wright State offers the Learning English for Academic and Professional Purposes (LEAP) Intensive English Program.

Benefits of the LEAP Program include 10 weeks of instruction in small classes that allow for individual attention. The instruction includes intensive speaking, listening, reading, writing, grammar, and the latest computer technology, including Web browsing and e-mail. Students are instructed by experienced faculty with advanced degrees in teaching English as a second language or a related field, and by adjunct instructors closely supervised by more experienced faculty. The LEAP Program also features regular meetings with native English-speaking conversation partners and scheduled sessions with trained tutors in the University Writing Center.

Holders of F-1 visas must be enrolled full-time in the LEAP Program, although a part-time course of studies is available for immigrants and visitors. The LEAP Program is not subject to WSU tuition or fee waivers. For more information, please call (937) 775-2505 or e-mail richard.johns@wright.edu.
Summary of Services and Office Phone Numbers

Admission Information: Office of Undergraduate Admissions, 775-5700

Financial Aid Information: Office of Financial Aid, 775-5721

Placement Testing dates, locations, exemptions:
University College, 775-5771

Advising Appointments: (call student’s assigned advising unit) University College, 775-5750;
Office of Adult and Transfer Services, 775-5777; for College or School, see listing on inside front cover

Course, Registration, and Refund Information:
Office of the Registrar, 775-5588, and Raider Express Telephone Registration, 775-4400

Fee Payments: Office of the Bursar, 775-5650

Academic Support
— for individual or group help: Tutoring Services, 775-2280, Writing Center, 775-4186
— for courses in study skills and/or fundamental math, reading, and writing: Developmental Education, 775-5770
— for disabled students adapting to college: Office of Disability Services, 775-5680
— for students age 25 or older returning to school, Office of Adult and Transfer Services, 775-5777
— for intensive English instruction for nonnative speakers of English: LEAP Program, 775-2505
ACADEMIC STANDARDS
AND REQUIREMENTS
Requirements for a Bachelor’s Degree

To graduate with a bachelor’s degree from Wright State University, all students must fulfill the following requirements:

Credit Hours—A minimum of 183 credit hours must be earned in approved courses.

Grade Point Average—At least a minimum cumulative GPA of 2.0 must be earned for courses taken at Wright State University.

General Education—The university’s general education requirements, as explained on pages 54–59, must be completed.

Residence Regulations—A minimum of 45 credit hours must be earned at Wright State University. At least 15 of the last 45 hours of credit must be earned at Wright State. A minimum of 30 hours of courses numbered 300 or above must be earned at Wright State.

Students must also fulfill all program requirements set by departments, colleges, and schools, some of which exceed these university minimums; see individual program requirements for details. Advisors in the University College, in Adult and Transfer Services, and in the colleges and schools are available for information and guidance in formulating programs of study.

Responsibility for registering in appropriate classes, scheduling, and fulfilling all university and program requirements for graduation rests with the student.

Students who are continuously enrolled or eligible to enroll continuously (students are eligible to enroll continuously if they are enrolled during any part of the calendar year) may elect to meet either the university requirements that were in effect when they entered Wright State or the university requirements that came into effect while they were continuously enrolled. Students who were not enrolled continuously must meet the university requirements in effect when they are readmitted to the university.

Students must meet the college or school requirements in effect when they are admitted to the college or school, and they must meet the program requirements in effect when they are admitted to a specific program or major. Students who are not enrolled continuously may be required to meet the college, school, or program requirements in effect when they are readmitted to a program. In addition, students who have not completed their program in seven years may have their college, school, or program requirements revised.

Writing Across the Curriculum (WAC)

Students must complete a total of eight WAC courses, six in General Education (GE) and two in the major. Effective fall 1996, this requirement applies to all new students and transfer students and to returning students who were last enrolled at Wright State summer quarter 1995.

Writing Across the Curriculum in General Education

The required General Education WAC courses are ENG 101, ENG 102, and four Writing Intensive (WI) courses from each of the following four categories: (1) EC 200*; (2) SOC 200; (3) One of the following Great Books courses: ENG 204, PHL 204, or REL 204; (4) One science course that satisfies the Area Four requirement and is designated as WI.*

Writing Across the Curriculum in General Education—Requirements for Transfer Students

Transfer students who have completed the transfer module that is part of the Ohio Articulation and Transfer Policy will be considered as having met the Writing in GE requirements. Transfer students who have completed at least 75 percent (40 hours) of the transfer module may meet the Writing in GE requirement by completing one writing intensive GE course. Transfer students who have completed less than 75 percent (40 hours) of the transfer module must complete the university’s General Education requirements, including the Writing in GE requirement, as follows: students with 50 percent to 74 percent (28–39 hours) of General Education completed must successfully complete two WI courses, in addition to English 101 and 102; those with 25 percent to 49 percent (14–27 hours) of General Education completed must successfully complete three WI courses, in addition to English 101 and 102; and those with less than 25 percent (fewer than 14 hours) of General Education completed must successfully complete all four designated WI courses, in addition to English 101 and 102.

When students who still need writing intensive credit in General Education courses already have credit for the General Education courses designated as writing Intensive at WSU, those students may apply credit from other designated Writing Intensive courses to meet that requirement. Those courses may be in General Education (e.g., a second Writing Intensive science course) or, when available, a third Writing Intensive course in the major. No Writing Intensive course in the major will be counted toward both General Education and writing in the major requirements. Transfer students who do not
successfully complete the WAC requirements above may satisfy the requirements for writing proficiency in GE by completing the appropriate substitution described below in "WAC Requirement Substitutions."

**Writing Across the Curriculum in General Education—Requirements for Returning Students**

Returning students who were last enrolled at Wright State summer quarter 1995 and who have not completed the General Education requirements must complete the Writing in General Education requirements as follows: students with at least 75 percent (40-56 hours) of General Education completed must successfully complete one WI course, in addition to ENG 101 and 102; those with 50 percent to 74 percent (28-39 hours) of General Education completed must successfully complete two WI courses, in addition to ENG 101 and 102; those with 25 percent to 49 percent (14-25 hours) of General Education completed must successfully complete three WI courses, in addition to ENG 101 and 102; and those with less than 25 percent (fewer than 14 hours) of General Education completed must successfully complete all four Writing Intensive courses, in addition to ENG 101 and 102.

When returning students who still need Writing Intensive credit in General Education courses have already taken earlier versions of General Education courses now designated as Writing Intensive, those students may apply credit from other designated Writing Intensive courses to meet that requirement. Those courses may be in General Education (e.g., a second Writing Intensive science course) or, when available, a third Writing Intensive course in the major. No Writing Intensive course in the major will be counted toward both General Education and writing in the major requirements.

Returning students who do not successfully complete the requirements above may satisfy the requirements for writing proficiency in GE by completing the appropriate substitution described below in "WAC Requirement Substitutions."

* WI sections of approved General Education substitution courses are available. Students should consult with an academic advisor before registering for a WI substitution course.

**Writing Across the Curriculum in the Major**

WAC in the major requires students to complete at least two WI courses in their major field. Successful completion of ENG 101 and 102 is a prerequisite for all WI courses in the major. All incoming first-year students, transfer students, and returning students who were last enrolled at Wright State summer quarter 1995 must complete this portion of WAC for their degree requirements.

Beginning fall 1996, WSU graduates returning to take a second degree must complete at least two WI courses in the new major.

Students pursuing a dual major may have the writing requirements for the second major waived at the discretion of the department or college.

**WAC Requirement Substitutions**

Students who do not successfully complete the WI portion of four GE courses (excluding ENG 101 and ENG 102) may satisfy the requirements for writing proficiency in GE in any one of the following three ways: (1) pass the WI portion of at least two GE courses and earn a grade of C or better in an approved advanced writing course; (2) pass the WI portion of at least two GE courses and prepare an acceptable portfolio that includes writing on demand; (3) earn a grade of "C" or better in an approved advanced writing course and prepare an acceptable portfolio that includes writing on demand. Students should consult with their academic advisor to determine the most appropriate means of satisfying this requirement. To fulfill the WI requirements in the major, students may, under rare circumstances, complete an Independent Writing Project or a designated WI independent reading course to fulfill only one of the two-course requirements in the major. This option requires the approval of the department chair and is not available to students for fulfilling the GE requirement.

**Second Degrees**

Students who hold a baccalaureate degree from an accredited institution, including Wright State, and who wish to earn a second baccalaureate degree at Wright State, must satisfy the requirements of the department and college that houses the second degree. Students earning a second degree must earn at least 45 credit hours beyond the minimum hours required for the first degree. At least the last 45 hours of course work are taken at Wright State, 23 of which must be in courses numbered 300 or above.

**Graduating With Latin Honors**

Undergraduate students with outstanding academic records are recognized at commencement. Three distinctions are made: summa cum laude (Latin for with highest honors) recognizes a cumulative GPA of at least 3.8; magna cum laude (with high honors) indicates a cumulative GPA of at least 3.6; and cum laude (with honors) indicates a final cumulative GPA of at least 3.4.

Academic honors are based on meeting the minimum honors GPA requirement for work attempted at Wright State University, as well as for all transfer college work attempted, as of the end of the term in which the student graduates (that is, by
the day on which term grades are due). In calculating cumulative GPAs for the purpose of graduating with honors, only the first grade earned for a course will be counted. This recalculation of the GPA may result in the loss of honors status at graduation. To be eligible for academic honors at graduation, students must have earned at least 45 credit hours at Wright State University.

See the quarterly class schedule for the exact drop and withdrawal dates.) After the withdrawal date, students need to successfully petition to drop; otherwise, the course will appear on their records with a grade.

### Applying for Degrees

Before graduating, students must submit an application for a degree. See the current class schedule for specific deadline dates. Those who do not complete the graduation requirements in time must file another application for a later graduation. Students who complete their degree requirements during winter or spring quarters participate in the June commencement. Those who complete their degree requirements during summer or fall quarters participate in the December commencement.

### Scholastic Policies

Wright State is on the quarter system. The academic year is divided into three quarters (fall, winter, and spring) and a summer session. Classes are assigned values in quarter credit hours. The credit hour is based on 50 minutes of instruction each week for one quarter, although there are exceptions. Laboratory courses usually require considerably more time for each quarter hour of credit. Students should carefully plan their academic program with an advisor, especially if they are also working while going to school. However, students are responsible for registering in appropriate classes, scheduling, and fulfilling all university and program requirements for graduation.

The minimum full-time undergraduate load is 12 credit hours per quarter with the average between 14 and 17 credit hours.

Students may drop a course or withdraw from the university without grades through the third week of the quarter, or its equivalent. These courses will not be recorded on transcripts. From the fourth through eighth weeks, or their equivalents, freshmen may drop a course or withdraw, but the course and a designation of "W" will appear on their records. All students other than freshmen may drop a course or withdraw from the fourth through the fifth weeks, or their equivalents, but the course and a designation of "W" will appear on their record. (Students should see the quarterly class schedule for the exact drop and withdrawal dates.) After the withdrawal date, students need to successfully petition to drop; otherwise, the course will appear on their records with a grade.

### Grading System

Academic achievement is indicated by the following letter grades and points used in calculating GPAs.

- **A**: Excellent—4 points per credit hour
- **B**: Good—3 points per credit hour
- **C**: Satisfactory—2 points per credit hour
- **D**: Poor—1 point per credit hour
- **F**: Failed—0 points per credit hour
- **W**: Withdraw—0 points per credit hour
- **X**: Student did not complete course or officially withdraw—0 points per credit hour

A student's GPA at Wright State is obtained by dividing the number of points the student has earned at Wright State by the total number of hours the student has attempted, excluding the following symbols, which appear on student records but are not used in computing GPAs:

- **L**: Audit—given only if arranged when the student registers
- **P**: No report—the instructor did not report a grade
- **M**: Passing—indicates work of C quality or better; given only for specifically approved courses
- **I**: Unsatisfactory performance
- **I**: Incomplete—given only when part of the required work is missing and arrangements have been made with the instructor to complete the work. The instructor must submit an incomplete grade contract at the time the grade sheet is submitted to the Office of the Registrar. If the work is not completed by the end of the following quarter, or earlier if required by the instructor, the I grade automatically is converted to an F and the grade point is recalculated, unless the instructor submits another I grade. Work for an incomplete received spring quarter does not have to be completed until the end of the following fall quarter if the instructor does not indicate an earlier date on the incomplete grade contract.
- **W**: Withdraw—given for courses from which the student officially withdrew, that the student dropped during the fourth through eighth week of classes, or equivalent, or for which the student successfully petitioned for withdrawal.

Grade reports are sent at the end of each quarter to the addresses on file in the registrar's office. Students who notice any discrepancy on their reports should contact the Office of the Registrar within 30 days.
Grades for Writing Intensive Courses in Writing Across the Curriculum

To receive WI credit, students must complete the writing component of the course with a grade of C or better. Writing intensive grades are entered separately from course grades on students' transcripts as "P" (pass) or no entry. For students passing the writing component of the course, both the grades for the course and the WI component will appear on the transcript and permanent record. If a student fails the writing component, only a grade for the course will appear.

Students may pass both components of the WI course, pass the course but fail the writing component, or pass the writing component but fail the course itself. A student who passes the writing component but fails the course may receive credit for fulfilling the writing requirement but may/will still need to repeat the course to fulfill the major or general education requirement. Students who do not pass the writing component of a WI course must still satisfy the WAC requirements. Ways to meet this requirement are described on pages 48 and 54. Students should consult with their academic advisor to determine the most appropriate means of satisfying this requirement.

Academic Standing

Student Classification

Undergraduate students are classified by the total number of credit hours they have earned at Wright State plus any transfer credits that have been accepted by the university.

- Freshman: 0-44.9 hours
- Sophomore: 45-89.9 hours
- Junior: 90-134.9 hours
- Senior: 135 hours or more

Entering a Major

All University College students with a cumulative GPA of 2.0 or higher must enter a major within a college by the time they have earned 90 credit hours, (or 135 credit hours if advised by Adult and Transfer Services) or they will be converted to nondegree status. Nondegree students are ineligible for financial aid, veteran's education benefits, and intercollegiate athletics.

Dean’s List

Students who attain high GPAs during a quarter are placed on the Dean’s List. To be named to the list, students must have at least a 3.4 GPA for the quarter; have completed for the quarter at least 12 hours of credit for courses in which they have received grades of A, B, or C; and cannot have received a grade of F, X, D, I, U, T, M, or N. The categories for the Dean’s List are: 3.4-3.59, honors; 3.6-3.79, high honors; and 3.8-4.0, highest honors.

Good Standing

Students who have earned a cumulative GPA of 2.0 or higher, or who have not been on probation for more than two consecutive quarters, are considered to be in good standing.

Probation

Scholastic action is determined on the basis of cumulative GPA. When a student’s cumulative GPA drops below 2.0, the registrar takes scholastic action by placing the student on probation. Students will not be placed on probation until they have attempted six or more credit hours. Whenever students subsequently attain a cumulative GPA of at least 2.0, they are removed from probation.

Students who are on probation must have their advisor’s approval of their course selection before they register for classes. Advisor approval is also required for all drop-add transactions. The student’s course load may be limited if the advisor feels such a restriction is necessary. The advisor may also require the student to complete counseling, remedial work, and course repeats; restrict enrollment; and require the student to complete other steps.

Scholastic actions are determined on the basis of quarter hours computed in the Office of the Registrar. Since credit hours for transfer, proficiency, and grades of M, P, and I are not used in computing quarter and cumulative averages, they are not considered in determining scholastic action.

Petitioning for Exceptions

Exceptions to scholastic regulations may be petitioned to the University Undergraduate Petitions Council. Petition forms are available in most academic department offices and in the Office of the Registrar. These forms are filed in the Registrar’s office.

Students petitioning to drop a class with a grade of W or completely withdraw from a quarter, must submit the petition to the registrar’s office before the end of the quarter in which the withdrawal is requested. Petitions submitted after the quarter has ended will, if approved, remove only the hours and points from the student’s GPA. In this case, the course and original grade will remain a part of the student’s record. Students should consult with their academic advisor before submitting a petition.
Repeating and Auditing Courses

Repeating Courses

Courses counted as part of the first 45 credit hours (including transfer hours) can be repeated if the grade earned was a D, E, or X. The course may be repeated until the student has achieved a grade of at least a C. Only the last attempt for each course will be counted in the cumulative GPA as long as it is completed no later than the quarter in which the first 60 credit hours are earned (exception: or until the course is offered again, if ever, during the regular academic year). However, each grade received for a repeated course will become a part of the student’s permanent record.

After the first 45 hours (including transfer hours), students may repeat any course in which they earned a grade of D, E, or X until they have achieved at least a grade of “C”. Each grade will become part of the permanent record and will be counted in the cumulative GPA.

Students may repeat courses in which they have earned a grade of A, B, or C in order to increase their knowledge or to meet program requirements, but the hours and points for the repeat will not be calculated in their hours earned or in the determination of their cumulative GPA. Neither will the hours or points be used to meet graduation requirements.

Whenever a student repeats a course, the student must specify this when registering.

Students in those program units where the repeat policy is more rigorous than that of the university shall follow the policy of that department, college, school, or division.

In calculating cumulative GPAs for the purpose of graduating with honors, only the first grade earned for a course will be counted.

Students may not repeat a course after graduation in order to alter their final GPA at the date of graduation. They may repeat a course later, but the second grade will not affect their undergraduate GPA.

Auditing Courses

If class space permits, a student may audit a course, with written approval from the instructor before enrolling. The amount of participation required of auditing students is left to the discretion of the instructor, but it cannot exceed that required of a regular student. The student may not use audited courses to establish full-time status, and the student may not change his or her registration from audit to credit or from credit to audit after the first week of class.

Dismissal and Readmission

Dismissal from the University

Students who remain on probation for two quarters may be dismissed from the university for unsatisfactory academic performance. Also, students enrolled in study skills classes who do not successfully complete more than one-half of their developmental course work over a period of three quarters will be subject to dismissal. Dismissal action is taken by the chief academic officer of the college, school, or division to which the students are assigned, in consultation with the head of the respective program unit or the academic advisor. In taking dismissal action, the academic officer will generally consider the student’s progress toward meeting degree requirements as well as overall academic performance.

Notice of dismissal from the university will be sent directly to the student by the chief academic officer of the college, school, or division to which that student is assigned.

Readmission

Readmission petition forms may be obtained from, and must be submitted through, the Office of Undergraduate Admissions. To be readmitted, the student must be accepted by a college, school, or division. Readmission petitions are reviewed by the chief academic officer or the petitions committee of the appropriate school, college, or division.

Readmitted students are continued on mandatory advising. Students who are readmitted following academic dismissal may be subject to special requirements to remove academic deficiencies as determined appropriate by the college, school, or division.
GENERAL EDUCATION REQUIREMENTS
General Education at Wright State

A bachelor's degree awarded by a university implies more than career preparation or specialized technical competency. A university education should be broadly based in order to promote intellectual growth, cultivate informed understanding, encourage breadth and flexibility of perspective, and foster a critical examination of social, cultural, and scientific realities. Accordingly, the General Education program at Wright State University seeks to:

- sharpen critical thinking, problem solving, and communication skills as a basis for life-long learning;
- cultivate an awareness of the moral and ethical insight needed for participation in the human community;
- increase knowledge and understanding of the past, of the world in which we live, and of how both past and present have an impact on the future.

These purposes are embodied in a program covering a broad spectrum of skills and knowledge, and organized to provide a coherent educational experience.

As a part of the requirements for a baccalaureate degree at Wright State University, students must complete a minimum of 57 hours of course work in the General Education program. The specific requirements are listed below and must be completed prior to graduation. In general, courses numbered 100 should be taken during the freshman year, and courses numbered 200 should be taken during the sophomore year; however, some programs at the university allow students to take the General Education courses throughout the four years of enrollment. Students should complete English 101 and 102 and the General Education mathematics requirement by the time they have earned 60 credits at Wright State University (see the General Education checklist on page 64).

Writing Across the Curriculum (WAC) in General Education

The required General Education WAC courses are ENG 101, ENG 102, and four Writing Intensive (WI) courses from each of the following four categories: (1) EC 200*; (2) SOC 200 (required); (3) One of the following Great Books courses: ENG 204, PHL 204, or REL 204; (4) One science course that satisfies the Area Four requirement and is designated WI.*

Transfer and returning students should see page 48 or meet with their academic advisor to determine the number of WAC courses needed to complete the WAC in General Education requirement.

* WI sections of approved General Education substitution courses are available. Students should consult with an academic advisor before registering for a WI substitution course.

Registration for Writing Intensive Courses

Each WI course is clearly identified in the quarterly class schedule. When registering for a WI course, students are automatically registered for the writing component of the course, a "0" credit hour lab. Students may not drop a WI course and lab separately.

WAC Requirement Substitutions

Students who do not successfully complete the WI portion of four GE courses (excluding ENG 101 and ENG 102) may satisfy the GE requirement in other ways. Students should see pages 48 and 49 or contact an academic advisor for information on these options.

General Education Substitutions

Substitutions can be made for some General Education courses. Some major programs—as well as the preprofessional programs for premedical and predental students (see the section on Preprofessional Programs on page 18)—may have program requirements that will affect a student's choice of General Education courses. Approved substitutions listed below are open to any student as an option to the General Education course with which they are listed.

Honors Sections

Honors sections of General Education courses are available for both entering freshmen and continuing Wright State students who meet Honors Program criteria. Honors sections are limited to an enrollment of 20; encourage student participation; offer more sophisticated and complex assignments; and provide greater opportunities for analysis, synthesis, and creative expression. Honors students may also choose to substitute UH 201, 202, and 203 for some General Education courses (see below). For more information see the section on the University Honors Program on page 17.
General Education Requirements

Area One—Communication and Mathematical Skills

11 hours

Area One requirements help students develop a command of written communication, disciplined thought processes, and the ability to manipulate abstract and mathematical concepts.

ENG 101-4 Processes of Writing
Introduces students to principles of effective written communication and concepts of reading and writing to learn. Stresses invention, drafting, revising, and editing, along with effective critiquing and collaborating. Enrollment based on placement essay examination.

ENG 102-4 Effective Written Discourse
Adapts principles introduced in ENG 101 to writing tasks assigned throughout the university. Stresses writing effectively within various forums, reading critically, using source materials, and summarizing. Prerequisite: Grade of "C" or better in ENG 101.

MTH 145-3 Mathematics and the Modern World*
Applies mathematics to modeling real world problems from the behavioral, computational, managerial, and social sciences. Includes such topics as graph theory, linear programming, probability, descriptive and inferential statistics, voting systems, game theory, population growth, computer algorithms, and codes and data storage. Prerequisite: MTH 126 or MTH 127 or equivalent or at least level four on the math placement test.

*Substitutions: MTH 143 or MTH 228 or MTH 229 and 230 or STT 264 and 265 or STT 160

Area Two—The Western Experience

15 hours

Area Two requirements help students develop a historical perspective and aesthetic appreciation through studying the Western heritage, including its written record and artistic achievements, in relation to contemporary culture.

The Western World
(All required)

HST 101-3 The Western World: The Ancient and Medieval Eras
An examination of the character of the premodern world from prehistory through the 14th century, with special attention to those aspects of ancient and medieval life that had the greatest effect on the development of Western society, politics, and culture.

HST 102-3 The Western World in Transition: The 14th–18th Centuries
An examination of the roots of the modern Western world emphasizing the revolution in economic, political, religious, and demographic realities that occurred between the 14th and the 18th centuries. Prerequisite: HST 101.

HST 103-3 The Modern Western World: The 19th–20th Centuries
An examination of the nature and consequences of modernization—its failures, accomplishments, and problems, with special attention to the phenomena that shaped the Western world of the 19th and 20th centuries. Prerequisite: HST 102.

Great Books of the Western World*
( Writing Intensive) (Choose one)

ENG 204-3 Great Books: Literature
An introduction to selected masterpieces of poetry, drama, and fiction from the Western literary tradition, from the Greeks to the 20th century, viewed in their historical context and for their enduring interest. (Writing Intensive)

PHL 204-3 Great Books: Philosophy
An introduction to selected great books in the history of Western philosophy, chosen from each of three eras (ancient/medieval, modern, and contemporary) and examined both within their respective historical frameworks and as an exercise in critical thinking. (Writing Intensive)

REL 204-3 Great Books: The Bible and Western Culture
A study of selected Biblical writings viewed in their original cultural contexts and chosen to reflect the varieties of Biblical literature, the Bible's relationship to various societies, and its role in the development of Western culture.

*Substitution: Honors students may meet the Great Books requirement with UH 201. (Writing Intensive)
Fine and Performing Arts
(Choose one)

ART 214-3 Visual Art in Western Culture
A general introduction to the visual arts focusing on selected major works of art throughout history. Discusses comparisons across time, basic art media, and the formal characteristics of art.

MUS 214-3 Music in Western Culture*
An introduction to the music of Western culture from the Middle Ages to the present. Emphasis on listening skills; elements of music; major styles, genres, and composers; and cultural context.

TH 214-3 The Theatre in Western Culture
An introduction to the many arts of the theatre, including the roles of the actor, playwright, director, designer, critic, and audience. Selected scripts from representative historical periods are examined as an aid in understanding the theatrical event.

* Substitution: MUS 121.

TH 214-3 The Theatre in Western Culture
An introduction to the many arts of the theatre, including the roles of the actor, playwright, director, designer, critic, and audience. Selected scripts from representative historical periods are examined as an aid in understanding the theatrical event.

† Substitution: Honors students may meet the Fine and Performing Arts requirement with UH 201.

Area Three—The Non-Western World

6 hours

Through a comparative and regional study of non-Western cultures, Area Three requirements help students develop an understanding of cultures other than their own and of the realities of global interdependence.

Comparative Studies
(Choose one)

CST 220-3 Comparative Non-Western Environments
An examination of distinctive environments of Asia and Africa through analysis of the geographic patterns of land use, population, settlements, economic activities, languages, religions, and political systems.

CST 230-3 Comparative Non-Western World Views
An examination of the world views of selected non-Western peoples and their varied expression in literature and religion, emphasizing examples from Asia, Africa, Latin America, and the Middle East.

CST 230 Comparative Non-Western Literature
An introduction to selected non-Western literature from Asia, Africa, Latin America, and the Middle East, emphasizing common cultural, social, and political themes.

CST 230 Comparative Non-Western Religions
An introduction to non-Western religious world views, their expression, and their communication, using examples from Africa, Asia, Latin America, and the Middle East and exploring differences between major types of cultures and religions.

CST 240-3 Comparative Non-Western Cultures
An introduction to the cultural diversity and uniqueness of selected areas of Asia, Africa, Latin America, and the Middle East as reflected in their cultural systems or in particular cultural manifestations such as the arts.

CST 240 Non-Western Cultural Systems
An introduction to non-Western cultural systems with examples drawn from several regions of the world, emphasizing how non-Western societies have addressed universal human problems and adapted to changing world conditions.

CST 240 Comparative Non-Western Social Systems
An examination of political processes and economic systems in Asia, Africa, Latin America, and the Middle East with special attention to contemporary issues.

CST 250-3 Comparative Non-Western Economic Systems
A comparison of the economic systems in Asia, Africa, Latin America, and the Middle East with the Western system with which most students are familiar; emphasis on developing and socialistic economies and on contemporary problems, including technological change and resource development.

CST 250 Comparative Non-Western Political Systems
A comparative study of the political processes, institutions, ideologies, and contemporary issues in non-Western societies, emphasizing the relationships between culture and politics.
Regional Studies
(Choose one)

RST 260-3 Regional Studies: Asia
An introduction to the environments, human organizations, and populations of selected regions or countries in Asia, providing an overview of the region with focus on a particular part of the region such as Japan, China, or South Asia.

RST 260 Asia: Japan
A brief introduction to Asian environments and cultures and a detailed examination of the development of China and of the conflict between traditional values and cultural patterns and current development efforts.

RST 260 Asia: India
A brief introduction to the culture and society of Asia and a detailed examination of the themes and structures that unify South Asian culture.

RST 270-3 Regional Studies: Africa
An introduction to African environments, diversity of cultural heritages, changes due to modernization, colonialism, slavery, and independence with a brief survey of the relations of Africa to other non-Western regions and the contributions of Africa to world civilization.

RST 280-3 Regional Studies: Latin America
A survey of non-Western societies, including Indians, mestizos, blacks, and the peasantry, from pre-Columbian and African origins to the present, in terms of ideology, organization, social structure, culture, and economic activities.

RST 290-3 Regional Studies: The Middle East
An introduction to the history, peoples, cultures, and geography of the Middle East, from Mauritania to Pakistan, from the seventh century to the present.

Area Four—Understanding the Contemporary World

25 hours

Area Four requirements help students develop an understanding of the physical world, of the relationship of science and technology to society, of individual development, of institutions and their impact on individuals, and of the methodologies used in studying these matters.

Natural Sciences

Choose three courses (lecture and lab); at least one must be Writing Intensive (WI). Courses offered as WI may vary from quarter to quarter. See quarterly class schedule.

Biology*

BIO 105-4 Introductory Biology: Food
Biological principles applied to the nature of food, its production, and use in the human body. Topics include molecular biology, photosynthesis, respiration, digestion, nutrition, agricultural ecosystems, issues of feeding a rapidly growing human population. Three hours lecture, two hours lab.

BIO 106-4 Introductory Biology: Biodiversity
Biological principles and processes applied to the origin, interaction, and extinction of species. Laboratory and lab topics include paleobiology, speciation, macroevolution, adaptive radiation, symbiosis, biogeography, and the scientific management of modern biological resources. Three hours lecture, two hours lab.

BIO 107-4 Introductory Biology: Disease
Biological principles applied to the study of disease: causes, controls, and natural defense against infection. Topics include microscopy, pathology, antibiotics, immunology, and epidemiology with historical perspectives and an emphasis on investigative techniques. Three hours lecture, two hours lab. Prerequisite: BIO 106.

Chemistry*

CHM 105-4 Chemistry of Our World: Living Things
An examination of the principles of covalent bonding and of the structures and reactions of molecules of importance to living things, with attention to the technological, regulatory, and social complexities of problems related to them. Three hours lecture, two hours lab.

CHM 106-4 Chemistry of Our World: Materials
An examination of the bonding of metals and nonmetals to explain the nature of familiar materials of industrial importance with some attention to the risk-benefit implications of these materials and technologies for consumers. Three hours lecture, two hours lab.
CHM 107-4 Chemistry of Our World: Energy and the Environment
An examination of the gaseous and liquid states and thermochemistry as a basis for understanding air and water quality, and fossil and nuclear fuels with some attention to the chemistry of the solar system. Three hours lecture, two hours lab.
*Sequence substitution (may be required for certain majors): CHM 121, 122, and 123; or CHM 102 and ANT 201 and 202. Honors students may substitute UH 203 for CHM 107.

Geological Sciences*

GL 105-3 The Planet Earth
An introduction to the composition and structure of the earth through a study of the physical and chemical processes (weathering, sedimentation, and the plate tectonic cycle) that have operated to produce the earth, its minerals, rocks, landforms, and economic mineral fuel deposits. Concurrent registration in GL 115 required.

GL 115-1 The Planet Earth Laboratory
Study of rocks and minerals; field trips, map interpretation; and practical work on ground water, glaciation, and structural geology. Laboratory component for GL 105.

GL 106-3 The Evolving Earth
Exploration of time in geology through a study of the history of the earth and of the life as revealed by the physical and biological evidence recorder in the rocks. Corequisite: GL 116.

GL 116-1 The Evolving Earth Lab
Exercises in time measurement, correlation of stratified rocks, evolution and biological diversity in the fossil record, and paleontology. Laboratory component for GL 106.

GL 107-4 The Earth and Human Affairs
An examination of the interactions of humans with the earth in terms of geological hazards (floods, landslides, earthquakes, and volcanoes) and of natural resources (soil, water, ores, industrial minerals, and fossil fuels). Lab exercises on slope stability, earthquakes, soil conservation, ground water, toxic waste, and the economic aspects of mineral extraction and fossil fuels. Three hours lecture. Recommended preparation: GL 106.

GL 117-1 Earth and Human Affairs Lab
Exercises and experiments on geologic hazards (earthquakes, floods, mass movements), resources (soil and water), and mineral economies.

*Sequence substitutions (may be required for certain majors): GL 251/252, 253/254, and 255/256. Honors students may substitute UH 203 for GL 107.

Physics*

PHY 105-3 Sounds and Colors
A study of wave motion with an orientation toward phenomena experienced by our senses, such as musical sounds, noise, and the colors occurring in nature. Concurrent registration in PHY 115 required.

PHY 115-1 Sounds and Colors Laboratory
Experiments to illustrate the physical aspects of what we see and hear. Lab component of PHY 105 for students using the course to meet the General Education science requirement.

PHY 106-3 Revolutions in Physics
Introduction to astronomy with emphasis on the solar system. Topics include the earth-moon system, other planets and their satellites, space exploration, and theories for the origin of the solar system. Concurrent registration in PHY 116 required.

PHY 116-1 Revolutions in Physics Laboratory
Astronomical observations and experiments. Laboratory component of PHY 106 for students using the course to meet the General Education science requirement.

PHY 107-3 Stars, Galaxies, and the Cosmos
An introduction to astronomy with emphasis on the universe of stars and galaxies and covering stellar evolution, astrophysics, and cosmology. Concurrent registration in PHY 117 required.

PHY 117-1 Stars, Galaxies, and the Cosmos Laboratory
Astronomical observations and measurements, laboratory experiments, and a visit to a planetarium. Lab component of PHY 107 for students using the course to meet the General Education science requirement.

*Sequence substitutions (may be required for certain majors): PHY 111/101, 112/102, and 113/103 or PHY 240/200, 242/202, 244/204. Honors students may substitute UH 203 for PHY 105 or 106 or 107.
Behavioral Science

(Required)

PSY 105-4 Psychology: The Science of Behavior
Considerations of the causes of behavior. Includes physiological processes; learning, memory, and processing of information; perceptual, cognitive, and social changes from birth to old age; and individual differences in thoughts, feelings, and actions.

Social Institutions and Processes

(All required)

SOC 200-3 Social Life
An introduction to the processes through which individuals become members of groups, organizations, institutions, and societies, and how human social interactions lead to changes in social life and structures. (Writing Intensive)

PLS 200-3 Political Life
An examination of political power relationships in contemporary society, emphasizing the origins and forms of power and the key social structures exercising power with contemporary public issues providing case studies of the consequences of political relationships.

EC 200-3 Economic Life
An introduction to basic economic concepts such as resource allocation, costs, supply, demand, and public goods; topics covered include American capitalism, market failures, unemployment, inflation, and taxation. (Writing Intensive)

* Sequence substitution: EC 201, 202, and 203.

† Honors students may substitute UH 202 for any one of the three required Social Institutions and Processes courses.
CHOOSING COURSES AND MAJORS
Choosing Courses

Students are responsible for choosing courses that are appropriate for their academic needs and goals. Although there are many factors for students to consider, choosing classes need not be viewed as a difficult task. There are logical patterns to the course requirements of the many different majors, and this section of the catalog can help students understand those patterns.

On the next few pages, students will find the following references:

- **General Education Checklist.** This checklist is very useful for first- and second-year students for selecting primary and alternate courses. It can also help students keep track of their remaining General Education requirements by checking off the category boxes as they complete courses. Note that some categories show an “RS” symbol, indicating that a required substitution or a required selection is possible in that category due to a major’s program requirements. Students should check their major’s requirements for such substitutions or selections before taking a course from these categories. Undecided students usually avoid these categories when possible in favor of others without an RS symbol.

- **Math and Statistics Sequences.** This flow chart shows some of the most commonly required sequences and prerequisites. It is a graphic guide to which mathematics and statistics courses must be taken in what order.

- **Still Deciding on a Major?** This guide lists some courses required by every Wright State major and shows a sample first-year schedule for undecided students.

- **Exploring Majors and Careers.** This guide suggests some on- and off-campus resources for students who need guidance in choosing a major or career.

- **Summary of Program Admission Requirements.** This quick reference shows admissions requirements for each college. Where applicable, a further breakdown is given of admissions requirements to individual departments.

Sources for Courses

Normally a student who has declared a major will refer to an official listing of required and recommended courses for that major, including General Education courses. There are several sources for finding these required and recommended courses. This catalog, for instance, shows program requirements for each major, and a summary of General Education courses and requirements is provided on page 64. Also, most academic departments provide program check sheets for their majors.

**Undecided Students**

Students who are still exploring majors usually choose courses recommended by their advisor and General Education courses from categories that have no required substitutions or required selections due to a student’s major (i.e., no RS symbol on the General Education Checklist). Undecided students should also refer to the Exploring Majors and Careers guide on page 66 for help in choosing courses and exploring majors.

**Meeting with an Advisor**

While all students may meet with their academic advisor for help in choosing courses, this is often not required. However, it is strongly recommended that students meet with their advisor during their first quarters after entering the university, and again upon transferring to the college or school of their major. Undecided students should work especially closely with their advisor.

**Course Selection Tools**

- **Raider On-Line Express (ROX).**
- **Raider Express Telephone Registration.**
- **“Ask Me” Computer Terminals.**
- **Quarterly Class Schedule Bulletin.**
- **Raidor Express Telephone Registration** are invaluable to students for checking the availability of a specific course (see the back cover of the quarterly class schedule for details on how to use phone registration). However, students also need to check for prerequisites, corequisites (e.g., a concurrent lab), and restrictions that limit enrollment in a particular section of a course to a specific group of students, such as “honors” or “elementary education majors.”

**First-Year Courses**

First-year students usually choose most of their courses from General Education, Math, developmental education, and specific courses required for their major as listed in the catalog or on a program check sheet. Students are expected to complete the General Education English, math, history, and natural science requirements before reaching junior status; therefore, many students enroll in some of these courses during their first year.
English Courses

Placement test results (or transfer credit) determine which English course a student should enroll in first. The student's advisor will interpret this information for the student. Some students need developmental education course work to prepare them for ENG 101. Many first-year students will not start ENG 101 until their second quarter, and many of those who do take ENG 101 their first quarter will not enroll in ENG 102 until their third quarter.

Math Courses

Once students begin math courses, it is recommended that they continue with math each quarter until their math requirements are completed. The starting point is determined by placement test score or transfer credit, and the final math courses are shown in the major's program requirements in the catalog listing and on the departmental checklists. The Math and Statistics Sequences chart on page 65 is a graphic guide showing common math and statistics course pathways as determined by the course prerequisites.

Writing Across the Curriculum

For information on the university's Writing Across the Curriculum program and Writing Intensive (WI) courses, see pages 48, 49, 51, and 54. Writing Intensive courses are designated by "WI" on the General Education Checklist on page 64. Note that one of the General Education science courses must be taken as WI.

Courses Required to Enter a Major

First- and second-year students should select appropriate courses that will allow them to satisfy the requirements to enter the college and department of their major. The Summary of Program Admission Requirements on page 67 is an abbreviated listing of these requirements. Using this guide, students may determine what specific courses, grades, or GPA they need for entry. The listing may also be useful to students advised in the University College who must select a new major because they have reached 90 hours (135 hours in Adult and Transfer Services) and still have not met the admission requirements for their intended major.

Summary

Students are encouraged to use the information above and in the pages that follow to help them make wise course selections. While students are expected to be responsible for their own course selections, advisors are available to aid students in making those selections.
General Education Checklist

Area One—Communication and Mathematical Skills
Composition (8 hours)
Both required
- ENG 101 Freshman Composition
- ENG 102 Freshman Composition
Mathematics (3 hours)
Required (RS)
- MTH 145 Mathematics and the Modern World*

Area Two—The Western Experience
The Western World (9 hours)
All required
- HST 101 The Western World: The Ancient and Medieval Eras
- HST 102 The Western World in Transition: The 14th-18th Centuries
- HST 103 The Modern Western World: The 19th-20th Centuries

Great Books of the Western World (3 hours)
Choose one (RS; H) (WI)
- ENG 204 Great Books: Literature (WI)
- PHL 204 Great Books: Philosophy (WI)
- REL 204 Great Books: The Bible and Western Culture (WI)

Fine and Performing Arts (3 hours)
Choose one (RS; H)
- ART 214 Visual Art in Western Culture
- MUS 214 Music in Western Culture*
- TH 214 The Theatre in Western Culture

Area Three—The Non-Western World
Comparative Studies (3 hours)
Choose one (RS)
- CST 220 Comparative Non-Western Environments
- CST 230 Comparative Non-Western Literature
- CST 230 Comparative Non-Western Religions
- CST 240 Non-Western Cultural Systems
- CST 240 Music in Non-Western Cultures
- CST 250 Comparative Non-Western Political Systems
- CSE 250 Comparative Non-Western Economic Systems

Regional Studies (3 hours)
Choose one
- RST 260 Asia: Japan
- RSE 260 Asia: China
- RST 260 Asia: India
- RST 270 Africa
- RST 280 Latin America
- RST 290 The Middle East

Area Four—Understanding the Contemporary World
Natural Sciences (12 hours)
Choose three courses (lecture and lab) (RS). At least one must be writing intensive (WI).
- BIO 105 Introductory Biology: Biology of Food (Lab incl.)
- BIO 106 Introductory Biology: Biological Diversity (Lab incl.)
- BIO 107 Introductory Biology: Biology of Disease (Lab incl.)
- CHM 105 Chemistry of Our World: Living Things (Lab incl.)
- CHM 106 Chemistry of Our World: Materials (Lab incl.)
- CHM 107 Chemistry of Our World: Energy and the Environment (Lab incl.)
- GL 105 The Planet Earth & GL 115 Lab
- GL 106 The Evolving Earth & GL 116 Lab
- GL 107 The Earth and Human Affairs and GL 117 Lab
- PHY 105 Sounds and Colors & PHY 115 Lab
- PHY 106 Revolutions in Physics & PHY 116 Lab
- PHY 107 Stars, Galaxies, and the Cosmos & PHY 117 Lab

Behavioral Science (4 hours) Required
Choose one (RS; H) (WI)
- PSY 105 Psychology: The Science of Behavior*

Social Institutions and Processes (9 hours) All required (H)
Choose one (RS; H)
- SOC 200 Social Life (WI)
- PLS 200 Political Life
- EC 200 Economic Life (RS) (WI)

Total Hours Required: 57

*Substitutions are allowed for these courses; see the course descriptions on pages 51-55 and program requirements listed by the departments.

H=Honors students may meet the Great Books or the Fine and Performing Arts requirement with UH 201. Honors students may substitute UH 202 for any one of the three required Social Institutions and Processes courses.
RS=A required substitution or a required selection is possible; check major program requirements.
WI=Writing intensive sections will be available for satisfying the WAC requirement. See page 48 for more information.
Courses offered as WI may vary from quarter to quarter; see quarterly class schedule.
Math and Statistics Sequences

This chart displays the prerequisites and sequences for commonly required math and statistics courses. Prerequisites for a particular course are shown above that course. Students' first math courses depend on their math placement levels and majors. Students should consult with their advisor or catalog/program checklist for more detailed information.
Still Deciding on a Major?

Course Planning

Some majors require that students select specific General Education courses while others allow choices. Substitutions for certain General Education courses may also be required for some majors. The following courses are required regardless of a student's major; therefore, they are safe choices for undecided students:

- ENG 101 and 102*
- MATH courses through MTH 126/127*
- HST 101, 102, and 103
- PSY 105, PLS 200, SOC 200, and any RST course

Sample First-Year Schedule for Undecided Students

Fall
ENG ____ or DEV ____*
MTH ____ or DEV ____*
HST 101
Gen Ed or Elective

Winter
ENG ____ or DEV ____
MTH ____ or DEV ____
HST 102
Gen Ed or Elective

Spring
ENG ____ or Gen Ed
MTH ____ or Gen Ed
HST 103
Gen Ed or Elective

*Initial courses in English and mathematics are determined by placement tests or transfer credit.

This sample is only a general guide. Each student's real schedule may vary considerably, since there is great flexibility as to when many courses may be taken, especially General Education.

Undecided students often need more information on different majors and courses than students with a declared major, and therefore undecided students should work closely with their academic advisor.

Exploring Majors and Careers

Where and How to Get Information

Career Services: 3rd Floor, Student Union, 775-2556
- Career exploration counseling
- SIGI PLUS: computerized career guidance system
- Career resources library
- Trade publications
- Future job trends information
- Resume writing assistance
- Co-operative education: internships
- Career planning and decision-making course (LA 201)

University College: University Hall, 775-5750
- Academic advising and adjustment strategies
- Information on requirements for majors

Referral Sources: Informational interviewing ("networking")
- Advisors in the colleges
- Professors
- Professionals working in areas of interest
- Family members and friends

Courses
- General Education
- Electives to explore areas of interest
- Skill-building courses: computer literacy, interpersonal communication, technical/professional writing, etc.
- Class visits to learn course content (with instructor approval)
- College-sponsored career information courses

Campus Bookstore
- Review textbooks for courses of possible interest

Volunteer Opportunities
- Organizations
- Community service
Summary of Program Admission Requirements

Listed below is an abbreviated summary of the requirements to enter major programs, organized by college, and then by department, where needed. For a detailed statement of the admission requirements for a particular program, please see the listing for that specific college and the major in the following sections of the catalog. Grade point averages (GPA) are cumulative unless labeled otherwise.

College of Education and Human Services (see p. 69)
—Teacher Education Programs (minimums for consideration for admission): • 2.5 GPA • 45 hrs.
• acceptable scores on the Pre-Professional Skills Test (PPST) • formal application • interview
• two letters of recommendation • writing sample
—Rehabilitation Services • 2.35 GPA • 24 hrs.

College of Engineering and Computer Science (see p. 89)
• 2.25 GPA • 45 hrs. • grade of "C" or higher in ENG 101, 102, MTH 229, 230
Additional requirements for specific majors:
—Computer Science: • 2.25 GPA in all CS and CEG courses • grade of "C" or higher in CS 240, 241, 242
—All Engineering programs, including Computer Engineering:
• grade of "C" or higher in MTH 231, CHM 121 or PHY 240/200, and the computer programming class(es) specified by the department

College of Liberal Arts (see p. 103)
• 2.0 GPA • 24 hrs. • ENG 101 and 102 with grade of "C" or higher, plus HST 101, and two other General Education courses
Additional requirements for specific majors:
—Communication: • 2.5 GPA
—Economics: • grade of "C" or higher in MTH 128/129 or in a higher-level math course
—Modern Language: • 2.5 GPA or 3.0 GPA in foreign language courses
—Motion Picture BA: • 2.25 GPA
—Social Work (minimum for consideration for admission): • 2.25 GPA • grade of "C" or higher in SW 270 and 271 • formal application • additional requirements on p. 105
—Music • audition • three outside recommendations • formal application
—Urban Affairs: • 2.3 GPA
—B.F.A. in Art or Theatre (except for Motion Picture Production): • only 2.0 GPA and 24 hrs. are required
—B.F.A. in Motion Picture Production: • only 2.25 GPA, 24 hrs. and grade of "B" or "A" in TH 131 and 180

College of Science and Mathematics (see p. 163)
• 2.0 GPA • 24 hrs. • grade of "C" or higher in 2 courses in chosen major
Additional requirements for specific majors:
—Math: • MTH 229 and 230 with grade of "C" or higher in each and 2.5 GPA or higher for the average of the two
—Psychology: • 2.25 • 30 hrs.

College of Nursing and Health (see p. 143)
• 2.5 GPA • 48 hrs. in prescribed courses • 2.5 GPA and grade of "C" or higher in all prerequisite courses
• formal application • admission is competitive • additional requirements on p. 145

Raj Soin College of Business (see p. 147)
• 2.5 GPA • 45 hrs. • grade of "C" or higher in ENG 101, 102, and MTH 128/129 or in a higher-level math course
The College of Education and Human Services

The College of Education and Human Services assumes responsibility for one of the university's primary functions: preparing teachers, educational leaders, and professionals in health, education, and human services. Many programs within the college lead to licensure by the Ohio Department of Education. The Departments of Educational Leadership, Teacher Education, Health and Physical Education, and Human Services prepare licensed and non-licensed leaders for public and private schools and for community agencies. These leaders include public school teachers, principals, curriculum supervisors, central office administrative specialists, school guidance counselors, personnel counselors, rehabilitation specialists, and community and mental health counselors.

The Bachelor of Science in Education degree and the Bachelor of Science degree with majors in rehabilitation and organizational leadership are offered. The college also offers programs leading to the Master of Arts, Master of Education, Master of Rehabilitation Counseling, Master of Science, and Educational Specialist degrees.

Throughout its history, the college has maintained a close working relationship with the public schools and community agencies in the region. Frequent involvement of the College of Education and Human Services faculty in the schools and agencies of the area, and the advice and planning assistance of public school and agency personnel, serve to improve the college's programs, the programs of community schools, and the services of community agencies.

Note:
The Wright State University Report on the Quality of Teacher Preparation for Academic Year 1999-2000 can be found on page 385 in the Appendix, and on the Web site www.wright.edu/policies/passrates/
Special Note Regarding Teacher Preparation Programs

Licensure Program Updates
At the time of publication, the teacher preparation programs listed in this catalog were being finalized by the faculty. There may be some changes not reflected in this catalog, such as course titles and course numbers. Please consult with the college’s Office of Student Services, 378 Allyn Hall, for the current program descriptions.

As a result of recently passed legislation, state licensure programs for teachers and the nature of undergraduate majors have necessitated new programs. These programs require intensive practice and course work in reading and phonics. To ensure that you are made aware of the most current program requirements, please contact the college’s Office of Student Services, 378 Allyn Hall, (937) 775-2993. The state of Ohio will no longer issue teaching certificates, by law, beginning September 2, 2002.

Eligibility for former certification programs is determined by the following factors:
- the student’s ability to be accepted in the WSU Teacher Education program,
- the space available in the programs, and
- the probability of completing all program requirements by the end of summer 2002.

The probability of acceptance into former certification programs at WSU will be reduced as we approach 2002. Students beginning a certification course of study must complete their certification requirements prior to September 2, 2002. In order to meet this deadline, you must have met all of the following requirements:
- completed your program of study,
- passed Praxis II (PLT and Speciality Area(s)),
- completed your Bureau of Criminal Identification and Investigation background/fingerprint check with the results transmitted to the Ohio Department of Education, and
- had your certification application received by the Ohio Department of Education, Office of Professional Development and Licensure prior to September 2, 2002.

Accreditations
The College of Education and Human Services meets the standards of, and has been approved by, the Ohio State board of Education, and is a member of the American Association of Colleges for Teacher Education. The college’s teacher education programs are accredited by the National Council for Accreditation of Teacher Education (NCATE). The college’s community and school counseling programs are accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), and the Rehabilitation Counseling programs carry the Council on Rehabilitation Education (CORE) accreditation.

Admissions, Retention and Advising

The College of Education and Human Services follows the principle, supported by the Ohio Laws and Regulations of the State Board of Education and the accrediting agencies cited above, that the college has the right and obligation to consider personal factors, as well as academic achievement, as a basis for admitting and retaining a student in its professional programs. While academic performance is a major determinant of effective performance in a profession, it is not the only one. Because there are also skills, understanding, and personal characteristics unique to a particular profession (such as teaching and rehabilitation services), students seeking admission to the college’s programs must meet requirements in addition to those generally prescribed for enrollment in the university.

Prospective majors should see an academic advisor in the college for current admissions requirements. Information is available in the college’s Student Services office.

Teacher Education Admissions Policies

To be considered for admission to the College of Education and Human Services Teacher Education programs in Integrated Business Education, Vocational Education, Early Childhood Education, and Health and Physical Education, students must meet the requirements listed below. (For admissions policies for Music Education, see the College of Liberal Arts.)
Middle Childhood Education (without licensure) Admissions Policy

To be considered for admission to the College of Education and Human Services Middle Childhood Education Program, students must have:
1. completed at least 45 academic credit hours,
2. attained at least a 2.35 cumulative GPA,
3. achieved a minimum score on each section of the Praxis I Exam,
4. submitted a completed CEHS Teacher Education Program Application packet which includes:
   a. Evidence of GPA and Praxis I score,
   b. A self-assessment statement which includes the applicant's career goals,
   c. An interview may be required.

Meeting requirements does not guarantee admission to the Teacher Education Program. A student is officially admitted to the College of Education and Human Services program at the professional discretion of the faculty and staff.

All applicants for initial licensure must meet these admission requirements. All requirements are subject to NCATE and Ohio Department of Education (ODE) regulations. Application forms may be obtained from the College of Education and Human Services Student Services office.

Rehabilitation Services Admissions Policy

To be considered for admission to the College of Education and Human Services, rehabilitation services majors must have:
1. completed at least 24 academic credit hours,
2. attained at least a 2.35 cumulative GPA,
3. complete an InterUniversity Undergraduate Transfer Application.

A student is officially admitted to the College of Education and Human Services, rehabilitation services major, when these items are completed. Upon completion of the items, the student should contact the Undergraduate Rehabilitation Services faculty advisor to plan a course of study.

Note: the admission policy for a rehabilitation services minor is the same as for a rehabilitation services major. Students are advised to complete an interuniversity undergraduate minor declaration form and then contact the Undergraduate Rehabilitation Services faculty advisor to plan a course of study.

Transfer Students

Students transferring to Wright State University from other institutions or from other colleges of Wright State University must meet the same standards for admission in teacher education program in the College of Education and Human Services detailed above, including the 2.5 GPA, the completion of 45 credit hours (or equivalent) of college credit, and required scores on the PRAXIS I Exam for teacher education. Rehabilitation services majors need a 2.35 GPA and 24 credit hours completed.

Office of Professional Field Experiences

All of the College of Education and Human Services licensure programs include rich practicum experiences. The placement of these practicums occurs in the Office of Professional Field Experiences (OPFE), located in 378 Allyn Hall. Practicums are infused in the three Phases of the teacher licensure programs. Each Phase has an orientation, which occurs prior to the term in which the student hopes to take the specific Phase. To sign-up for a practicum experience students must attend the orientation and then fill out the Practicum Application on line at www.ed.wright.edu/pfe. The
OPFE makes arrangements with local school districts within a 30 mile radius of Wright State University. Since the OPFE places over 600 student each term, school administrators have requested that our students do not contact these schools directly for a placement. It is imperative that all contacts for a practicum originate in the OPFE.

**Advising**

**Teacher Licensure Students**

Upon admission to the College of Education and Human Services, each student is assigned two advisors: a faculty advisor and a teacher certification/licensure advisor. The faculty advisor supports and guides students in developing their professional goals and objectives. The teacher certification/licensure advisor prepares an individual program of study and sends one copy to the student, and files a copy in the student's file in the Office of Student Services. The teacher certification/licensure advisor is available to answer questions about teacher licensure, program requirements, course prerequisites, sequences, and university and college rules and regulations. Because of the sequential nature of many courses and the prerequisites needed in both the professional and academic components of the degree programs, students are strongly urged to consult an advisor before registering. Any deviation from the specified curriculum should be discussed in detail with a teacher certification/licensure advisor before it is undertaken. The college provides an undergraduate teacher education guidebook for all students in teacher education. This book should be studied carefully and kept with all academic records.

**Rehabilitation Services Students**

Upon admissions to the College of Education and Human Services, each student is assigned two advisors: a faculty advisor and an advisor from the College's Office of Student Services. The faculty advisor supports and guides the student in developing professional goals and structuring the rehabilitation course work to meet the interests of the career goals of the student. Additionally the faculty advisor prepares the student for practicum and develops the course of study for the rehabilitation services student.

The advisor from the College’s Office of Student Services completes the check sheet (one copy is provided to the student, one copy is filed with the CEHS Office of Student Services and one copy is forwarded to the faculty advisor) at admission to the rehabilitation services program; senior check sheets, verification on the practicum application and graduation checks for Human Services department approval.

**Retention**

To increase their likelihood of success, students in professional degree programs must meet certain criteria, at various stages in the program, to earn recommendation for licensure and graduation. These criteria reflect academic standards and show that the student can effectively perform responsibilities that include the ability to provide for students' safety; effectively communicate with students verbally and in writing; provide a stable, supportive environment that will promote student growth; and manage the instructional program for individuals and for small and large groups.

Faculty members, on the basis of their knowledge of students and their professional observations, evaluate students' progress in meeting these criteria and decide on whether to retain and recommend students for teacher licensure.

Students in rehabilitation services should meet with their faculty advisor throughout their course of study to discuss their career goals and future as a rehabilitation services provider.

**Athletic Training**

The athletic training program, leads to a Bachelor of Science in Education (B.S.Ed.) degree, with or without teaching certification, is designed to meet students' individual needs.

The certified athletic trainer is increasingly viewed as the expert in care of the physically active. Therefore, Wright State's program prepares self-directed graduates who can function in a number of settings and work in collaboration with other health care professionals to coordinate and improve the health care of the physically active.

The athletic training program at Wright State is anticipating accreditation from the Commission on Accreditation of Allied Health Education Programs fall 2001. Graduates of the program will also be eligible for the National Athletic Trainers Association's certification examination and to apply for Ohio licensure from the Ohio OT/PT/AT Board.

As a result of recent changes at the national level, certification requirements for athletic trainers are in the process of being revised. For the most current information, please contact the Department of Health, Physical Education, and Recreation (HPR) and the Office of Athletic Training, Room 316 E. J. Nutter Center or call (937) 775-3259/3223.
Athletic Training Admissions and Advising

The baccalaureate program in athletic training is a concentration within the Department of Health and Physical Education and in the College of Education and Human Services. Admission to Wright State University does not guarantee admission to the Athletic Training program.

In order to become eligible to apply for admission to the Athletic Training program, students should be accepted as degree-seeking students at Wright State University, complete all designated prerequisites courses with a combined 2.5 GPA, and have at least a 2.5 cumulative GPA. Due to the large number of applicants, admission will be competitively based upon cumulative GPA, performance on competencies, completion of field experiences and overall quality of work performed. The number of students admitted is determined by the availability of resources such as field experience sites and the number of faculty/clinical instructors. All students must submit an admissions application to the athletic training program by March 1 of each year. A signed copy of the Explanation of Technical Standards form should also be returned with the application.

All students must fulfill current health requirements, including immunizations (i.e. Hepatitis B) and an annual physical examination. The exam must certify that the student is in good health and able to actively participate in clinical and field experiences. Proof of a current physical and immunizations must be submitted at the time of application. Faculty may request a student’s reexamination if limitations interfere with the student’s clinical practice or learning. In addition, all students working offsite are required to purchase liability (malpractice) insurance in the amount specified by the athletic training program. Applications are available in the athletic training office. Students must provide their own transportation to offsite field experiences.

Pre-Athletic Training Program (Fall, Year 1)

All students interested in athletic training must complete the following application process. The following information is to be mailed to the Education Coordinator and postmarked on or before March 1:

1. Completed application form.
2. Three (3) typed letters of recommendation indicating the applicant's human relation skills and academic potential. One letter should be from a former/current teacher, one letter from an employer or administrator, and one letter from a certified athletic trainer or coach.
3. Typed statement of 250 words or less describing life experiences the applicant brings to the athletic training program.
4. Unofficial high school and college (if applicable) transcripts.
5. Physical examination.
6. Medical history form including HBV records.

Applications will be reviewed by the staff, interviews conducted with qualified individuals, and students admitted into the pre-athletic training program will be notified by April 15. The requirements for the pre-athletic training program are as follows:

1. Enrolled in ATR 261 and ATR 284.
   Students may seek acceptance into the athletic training program. Level I once the following requirements are met:
   1. Completion of ATR 261 and ATR 284 with an average grade of “B” or better.
   2. Above average evaluations (minimum of a 2.5 average score on Personal Development Evaluations) in field experiences by clinical faculty.
   3. If necessary, interview with staff athletic trainers.

Athletic Training Program, Level I (Winter/Spring, Year 1)

Enrollment in the following courses:

1. Winter: ATR 262, ATR 286, and HPR 250
2. Spring: ATR 360, ATR 386, and HPR 251

Athletic Training Program, Level II (Year 2)

To progress to Level II, students must have met the following requirements:

1. Complete 45 quarter hours.
2. Maintain a cumulative GPA of 2.5 or higher.
3. Complete first year course work with an average grade of “B” or better (i.e. ATR 261, ATR 284, ATR 262, ATR 286, ATR 360, ATR 386, HPR 250, HPR 251).  
4. Admission to the College of Education and Human Services and, if applicable, the teacher education program by the established deadline.

To remain in good standing in the athletic training program (Levels III and IV), the student must maintain a cumulative GPA of 2.5. In addition, the student must demonstrate commitment to the program and competence in athletic training knowledge and practical skills.
Degrees and Areas of Study

Please review the teacher education content preparation programs in the College of Science and Mathematics and the College of Liberal Arts. Many teaching areas require a bachelor’s degree in the content area, with teacher preparation being provided on the graduate level within a master’s degree program. Examples include: Mathematics Education, Science Education (Biology, Chemistry, Physics, etc.), Modern Languages (French and Spanish), Social Studies, English, Art, etc.

The college offers curricula leading to the Bachelor of Science in Education degree in selected teaching fields and for selected age levels and/or recommendation for Ohio teacher licensure in the fields listed below. Teacher licensure in Ohio also requires passing scores on examinations mandated by the state’s Department of Education.

The teacher preparation programs meet the State of Ohio Standards for Colleges and Universities preparing teachers. One of the requirements mandated by these standards is the completion of a minimum of 300 practice experience hours prior to student teaching. Full-day and/or half-day practices are required throughout Phase I and Phase II of the Early Childhood program, Multi-age Health and Physical Education program, and in Phase I (the undergraduate portion) of the Middle Childhood program and the Adolescent to Young Adult programs.

Early Childhood Education—Grades K–3, ages 0–8, Pre-K–3 Program (B.S.Ed.)

Middle Childhood—Grades 4–9, ages 8–14 (B.S.Ed.) (graduate program required for licensure)

Multi-Age—Grades K–12
Language (French, Spanish) (graduate program required for licensure) (see College of Liberal Arts)
Music Education (see College of Liberal Arts)
Health and Physical Education (B.S.Ed.)
Visual Arts (graduate program required for licensure) (see College of Liberal Arts)

Adolescent to Young Adult—Grades 7–12, ages 12–21
Sciences, English, Social Studies, Mathematics see College of Liberal Arts and College of Science and Mathematics (graduate program required for licensure)

Vocational
Ages 8 and Beyond—Grades 4 and Beyond
Vocational Education (B.S.Ed.)
Marketing Education (B.S.Ed.)
Integrated Business Education (B.S.Ed.)

Rehabilitation Services
(B.S. Rehabilitation Services)

The College of Education and Human Services offers a four-year curriculum leading to a Bachelor of Science degree with a major in rehabilitation services. This program prepares students to work with people who have disabilities, are in the penal system, abuse substances or people under the auspices of the human services system.

Organizational Leadership
(B.S. Organizational Leadership)

This new B.S. degree completion program is a management-focused, multidisciplinary, application-oriented major. It is designed for students with a two-year degree or its equivalent who want a broad academic background to prepare them for supervisory and management careers. The major combines courses in communication and management skills with the study of leadership theory and practice. Students will also learn problem-solving techniques and complete a leadership skill project. This integrated major prepares today’s and tomorrow’s leaders for the challenges across all career fields.

Endorsement/Validation of Standard Teaching Licenses

Curricula are available to validate standard teaching licenses in the following areas:

- Adapted Physical Education
- Adult Education—Full Time
- OWE/OWA
- Teaching English to Speakers of Other Languages (TESOL)
- Transition-to-Work
- Work-Site Teacher/Coordinator

Transition to Work

This endorsement is offered through the College of Education and Human Services for individuals who want to work as school vocational evaluators, vocational special education coordinators (VOSES), job training coordinators (JTCs), or work study coordinators. Students desiring to obtain a Transition To Work (TTW) Endorsement must hold either a vocational or intervention specialist license prior to participating in the TTW course work. Students desiring more information should call (937) 775-3270.
Degree Requirements

Students completing the teacher preparatory program in early childhood, integrated business education, marketing education, and health and physical education earn the Bachelor of Science in Education degree. Students in the teacher preparatory program in middle childhood earn the Bachelor of Science in Education degree upon completion of two teaching field concentrations and the professional concentration; Phases II and III of the professional concentration must be taken at the graduate level; please see the sample graduate program:

Sample Graduate Program of Study

ED 621-4 Human Development and Learning: Middle Childhood Perspective
ED 602-4 Schooling in a Culturally Diverse Society: Middle Childhood Perspective
EDS 624-3 Introduction to Learning Differences: Middle Childhood Perspective
ED 612-1 Practicum I: Middle Childhood Level
ED 645-3 Assessment: Middle Childhood Level
ED 622-3 Technological Instruction and Integrated Methods: Middle Childhood Level
ED 732-3 Principles and Practices of Middle Childhood Level Education
ED 606-4.5 Reading and Literacy Instruction I: Middle Childhood Level
ED 600-3 Classroom Management: Middle Childhood Level
ED 709-4.5 Diagnosis and Assessment of Reading Performance
ED 614-1 Practicum II: Middle Childhood Level
ED 607-4.5 Reading and Literacy Instruction II: Middle Childhood Level
ED 717-4.5 Phonics Instruction and Word Study
ED 616-1 Practicum III: Middle Childhood Level
(Choose Two Methods Courses)
ED 731-3 Integrated Middle Childhood Level Science Methods (and/or)
ED 610-3 Middle Childhood Level Mathematics Methods (and/or)
ED 629-3 Middle Childhood Level Social Studies Methods (and/or)
ED 624-3 Middle Childhood Level Literature, Speech, and Drama
ED 641-12 Practicum Internship: Middle Childhood Level Student Teaching

Total Graduate Licensure Hours: 50–62

To Complete M.Ed.:
ED 646-1 Inquiry and Prospectus
ED 771-1 Intern Assessment Seminar

General Degree Requirements

1. Completion of a minimum of 183 credit hours
2. Fulfillment of university General Education requirements
3. An overall cumulative GPA of 2.5 or higher for teacher education, 2.35 for rehabilitation services, 2.0 for organizational leadership and 2.0 for middle childhood education.

Specific Requirements

Early Childhood (Pre-K-3, Ages 3–8)
This program leads to licensure in Early Childhood Education for Pre-K to third grades (3–8 years old).
1. General requirements listed previously
2. Of the 192–194 credit hours required for graduation, a minimum of 86–88 quarter hours in professional education courses
3. Completion of prescribed pattern of courses

Middle Childhood (Grades 4–8, Ages 8–14)
This program does not result in state licensure at this level, additional graduate work is required.
1. General requirements listed previously
2. Of the 186–188 hours required for graduation, a minimum of 15 quarter hours in professional education
3. Fulfillment of requirements established in one or more major teaching fields with a 2.5 GPA in each field

Rehabilitation Services
1. General requirements listed previously
2. Completion of a minimum of 192 credit hours
3. Completion of prescribed pattern of courses

Organizational Leadership
1. General requirements listed previously
2. Completion of a minimum of 194 credit hours
3. Completion of prescribed pattern of courses

Health and Physical Education (Grades Pre-K–12, Ages 3–21)
1. General requirements listed previously
2. Completion of a minimum of 192 credit hours
3. Completion of prescribed pattern of courses

Marketing Education (Grades 4 and beyond, Ages 8 and beyond)
1. General requirements listed previously
2. Completion of a minimum of 196 credit hours
3. Completion of prescribed pattern of courses
Integrated Business Education
1. General requirements listed previously
2. Completion of a minimum of 190 credit hours
3. Completion of prescribed pattern of courses

Vocational Education
1. General requirements listed previously
2. Completion of a minimum of 192 credit hours
3. Completion of prescribed pattern of courses

Honors Program
Outstanding students enrolled in programs in the College of Education and Human Services have an opportunity to complete the University Honors Program or an honors program in education. This program provides students with expanded opportunities for creativity, self-direction, and excellence through special honors courses and an extended period of independent study.

Junior- or senior-level students enrolled in the College of Education and Human Services major are eligible for the honors program if they have maintained a 3.0 overall cumulative GPA, a 3.0 cumulative average in professional education, and have been recommended by a faculty member from the program area in which they plan to work.

Students interested in pursuing an honors program should consult their faculty advisor or an advisor in the College’s Office of Student Services.

Recommendation for Licensure
Every teacher in Ohio public schools is required to be licensed in the field or fields in which he or she is teaching. This license is issued by the Ohio Department of Education upon the recommendation of the College of Education and Human Services. Students may apply for licensure in the College of Education and Human Services Office of Student Services during the last quarter of their professional undergraduate programs. (Note: Many programs require graduate level study for licensure.)

A candidate for teaching licensure at Wright State University must be deemed to be of good moral character, have successfully completed the approved program of teacher preparation, obtained passing scores on the Praxis II exam, and be recommended by the dean of the College of Education and Human Services. Finger printing and a background check are also required for all applicants to receive an initial license.

“Good moral character” is defined as not having pleaded guilty to or not having been convicted of any felony, any violation of Section 2907.04 (Corruption of a Minor), Section 2907.06 (Sexual Imposition), or Division (A) or (C) of Section 2907.07 (Importuning) of the Revised Code, any offense of violence, theft offense, or drug abuse offense that is not a minor misdemeanor, or any substantively comparable ordinance of a municipal corporation or of another state. An individual who has pleaded guilty to or has been convicted of any such offense may have an application for licensure considered by the State Board of Education, provided the individual meets the conditions specified in rule 3301-23-23 of the Administrative Code.

Licensure of Students From Other Colleges Within the University
Students who receive degrees from other colleges within the university may also wish to obtain teaching licenses. They are subject to the same admissions requirements as described on pages 71 and 72. Recommendation for licensure will occur only after a student satisfactorily completes all of the requirements of the College of Education and Human Services. These include admission, selective retention, the major teaching field and related requirements, the preprofessional and Phase I professional courses, completion of professional courses at the graduate level, and a passing score on the Praxis II exam.

Licensure for Holders of Nonprofessional Degrees
Students who are graduates of other accredited colleges or universities are subject to the same requirements as described on pages 71 and 72.

In addition, the Office of Student Services in the College of Education and Human Services helps those seeking licensure in the teaching profession by providing evaluations of college transcripts. This service is provided for:

1. Currently enrolled WSU students
2. WSU alumni who have been previously certified and seek to obtain additional endorsements
3. Candidates who have applied for admission to WSU
4. Persons seeking additional and/or renewal of certification who have not previously attended WSU, but reside in the metropolitan area served by WSU
5. Residents of the metropolitan area seeking information on initial licensure
6. Persons who have been previously licensed in the state of Ohio, and whose course work was primarily taken at a state of Ohio institution
7. Persons who have been previously licensed and seek renewal and/or additional endorsements, but reside outside the metropolitan area served by WSU (exception for WSU alumni)
8. Persons who reside out of state and have not been previously licensed
9. Non-U.S. citizens or residents who reside outside the United States and seek a non-immigrant visa for the purpose of study (F-1, J-1 visas)
10. International inquiries from non-U.S. citizens or residents whose course work has primarily been at foreign institutions* 

Transcript evaluation results are not official and are subject to review at the time of admission to the College of Education and Human Services. Evaluation results are valid for one calendar year. If an updated evaluation is required by the client, an additional request form must be completed and the appropriate fee paid. 

Clients falling under the 4-10 categories will be assessed a nonrefundable $25 fee for each area of licensure requested.

For more information, contact the College of Education and Human Services, Office of Student Services, 378 Allyn Hall, (937) 775-3088.

* International students should first consult with the Office of International Studies.

School Nurse Licensure Program

The School Nurse Licensure program is offered as a graduate program. The 22-credit, graduate-level program leads to endorsement for licensure as a school nurse in the state of Ohio.

Prerequisites:

1. Baccalaureate degree with course work in growth and development, psychology, sociology, and/or anthropology.
2. License to practice professional nursing in the state of Ohio.
3. Course work in community health.

For more information, refer to the College of Nursing and Health (937) 775-3131 or the Department of Health, Physical Education, and Recreation (937) 775-3223.

Student Organizations

The following organizations are available to students of the College of Education and Human Services.

- Business Professionals of America is a national student organization composed of state association and local chapters serving persons pursuing careers in business and office occupations. This organization provides the opportunity for the development of leadership skills, personal and professional growth, and career-related competencies.
- Graduate students majoring in one of the college's counseling programs can be invited to join Chi Sigma Iota, an international honor society for the counseling profession.
- Kappa Delta Pi is an international honor society in education. Individuals are invited to become members of the society by vote of the chapter, because of high academic achievement and because they have exhibited a professional attitude indicating their ability to grow in the field of education.
- The Wright State University Rehabilitation Club provides rehabilitation majors and minors with opportunities to develop contacts with rehabilitation professionals, participate in professional conferences, participate in service projects and interact with peers on a social level.
- Students Council for Exceptional Children (SCEC), an affiliate of the International Council for Exceptional Children, is an organization for people interested in service for the exceptional learners, including rehabilitation counselors and special education teachers.

Athletic Training

The athletic training program, leads to a Bachelor of Science in Education (B.S.Ed.) degree, with or without teaching certification, is designed to meet students' individual needs.

The certified athletic trainer is increasingly viewed as the expert in care of the physically active. Therefore, Wright State's program prepares self-directed graduates who can function in a number of settings and work in collaboration with other health care professionals to coordinate and improve the health care of the physically active.
Degree Requirements—Athletic Training Without Teaching

General Education Requirements

ENG 101, 102; MTH 145; HST 101, 102, and 103 (20 hours)
Great Books (3); Fine and Performing Arts (3); Comparative Studies (3)
Regional Studies (3 hours); EC 200 (3), PLS 200 (3), PSY 105 (3), SOC 200 (3), BIO 107 (4), HPR 250 and 251 (8), (36 hours)

Curriculum Content

Physical Education

HPR 212 (4), HPR 214 (3), HPR 241 (3), ATR 261 (4), HPR 281 (4), HPR 354 (3), HPR 362 (3), HPR 410 (4)

Biology

BIO 221, BIO 352, BIO 353, BIO 451, BIO 456

Health Education

HED 230 (4), HED 330 (3), HED 331 (4), HED 431 (3), HED 432 (3), RHB 305 (4)

Activity Skill Requirements

8 HPR 200 level courses

Technology/Communications

COM 101 (3), EDT 280 (3)

Athletic Training


Total

204

Degree Requirements—Athletic Training With Teaching

General Education Requirements

ENG 101, 102; MTH 145; HST 101, 102, and 103 (20 hours)
Great Books (3); Fine and Performing Arts (3); Comparative Studies (3)
Regional Studies (3 hours); EC 200 (3), PLS 200 (3), PSY 105 (3), SOC 200 (3), BIO 107 (4), HPR 250 and 251 (8), (36 hours)

Curriculum Content

Physical Education

HPR 212 (4), HPR 214 (3), HPR 241 (3), ATR 261 (4), HPR 281 (4), HPR 354 (3), HPR 362 (3), HPR 410 (4)

Biology

BIO 221 (4), BIO 352 (4), BIO 353 (4), BIO 451 (4), BIO 456 (4)

Health Education

HED 230 (4), HED 330 (3), HED 331 (4), HED 431 (3), HED 432 (3), RHB 305 (4)

Activity Skill Requirements

8 HPR 200 level courses

Technology/Communications

COM 101 (3), EDT 280 (3)

Athletic Training


Professional Education

ED 301 (5), ED 221 (1), ED 303 (5), ED 321 (1), HPR 381 (3), HED 382 (3), ED 429 (12), ED 440 (3)

Total

237

Biological Sciences Education

See Biological Science Education programs in the College of Science and Mathematics.

Business Education: Integrated

The Integrated Business Education Comprehensive Licensure program leads to the Bachelor of Science in Education degree and state licensure. The program is designed to prepare outstanding teaching professionals in business education by offering a balanced program combining general education, professional education, and business content. The provisional vocational license in business education in Ohio is valid for teaching business subjects to learners ages eight and beyond and grades four and beyond.
Degree Requirements—Integrated Business Education

Bachelor of Science in Education Degree

General Education Requirements 54

Professional Education Requirements 36–47

ED 221, 223, 301, 303, 321, 323, 327, 429, 432, 440
EDS 333 Learning Differences: Introduction
COM 101 Essentials Public Address
EDT 280 Application Computer Technology

Business Education Content Requirements 104–107

ACC 201, 202
EC 201, 202, 203
EDT 204, 206, 207, 208, 209, 211, 212, 220, 221, 222, 305, 306, 335, 433, 434, 440
ENG 330 Business Writing
LAW 350 Legal Environment of Business
MGT 302 Management and Organizational Behavior
MKT 301, 302, 421
VOE 401, 406, 407, 421, 426, 431, 465, 469

Total (minimum requirement) 195–212

Chemistry Education

See Life Sciences/Chemistry and Earth Sciences/Chemistry Education programs in the College of Science and Mathematics.

Early Childhood Education

Pre-K–3 Program

The Pre-K–3 licensure program prepares students to teach children three years of age through grade three. The Pre-K–3 license qualifies a graduate for employment in day care, nursery school, headstart, public and private preschools, and primary (K–3) elementary grades. Students will be required to work with children from birth through third grade in Phases I, II, and III. The program requires courses in general education, professional education, and content curriculum.

Degree Requirements—Early Childhood Education (Pre-K–3, Ages 0–8)

General Education 46

Area One: Process of Writing
ENG 101, 102 Effective Written Discourse 8
MTH 143 Quantitative Reasoning 4

Area Two:
HST 101, 102, 103 The Western World 9
Great Books (Choose one):
ENG 204 Literature
PHL 204 Philosophy
REL 204 Bible and Western Culture
Final recommendation for licensure requires satisfactory completion of Praxis II examinations.

*This course was under development as this catalog went to press.

**Earth Science Education**

See Geological Sciences Education and Physics Education in the College of Science and Mathematics.
Economics Education

See Social Science Education in the College of Liberal Arts.

English Education

See Integrated Language Arts/English Education in the College of Liberal Arts.

General Science Education

See Integrated Science Education in the College of Science and Mathematics.

Health and Physical Education Multi-Age

Degree Requirements—Health and Physical Education (Multi-Age, Pre-K–12, Ages 3–21)

Bachelor of Science in Education Degree

General Education Requirements 57

Required Substitutions:
BIO 105, HPR 250, 251

Professional Education Requirements 33

*Field and clinical experiences required.

Curriculum Content 75

Health Education:
HED 230, 330*, 331, 431, 432; RHE 305; HPR 260 24

Physical Education:

Biology:
BIO 221, 352, 353, 451, 456 20

Activity Skill Requirements 16

Team*:
HPR 200 Teaching Basketball (3 required)
HPR 200 Teaching Soccer
HPR 200 Teaching Softball or Baseball
HPR 200 Teaching Volleyball

Individual*:
HPR 200 Teaching Golf (2 required)
HPR 200 Teaching Tennis

Fitness*:
HPR 200 Teaching Exercise and Health Related Fitness (1 required)

Dance and Rhythms*:
HPR 200 Teaching Dance and Rhythms (1 required)

Leisure*:
HPR 200 Teaching Lifelong Leisure Activities (1 required)

A minimum of six HPR 200 courses must be completed prior to student teaching.

Approved Electives 5

Any ATR, HED, or HPR course 200 or higher. Other courses with written approval from the department chair.

Total (minimum required) 192

Optional Concentrations

Adapted Physical Education 21

EDS 444, 459; HPR 213, 284, 312, 384, 484

Athletic Training 56

ATR 360 Therapeutic Modalities in Athletic Training 3

ATR 284 Practicum I: Care of Physically Active 3

ATR 285 Practicum II: Rehabilitation Situations and Protocols 3

ATR 286 Practicum III: Emergency Situations and Protocols 3

ATR 384 (Writing Intensive) Practicum IV: Lower Body Assessment Lab 3

ATR 385 Practicum V: Upper Body Assessment Lab 3

ATR 386 Practicum VI: “Treatment” Situations and Protocol 3

ATR 484 Practicum VII: Clinical and Surgical Rotation 3
History Education
See Social Science Education in the College of Liberal Arts.

Marketing Education
The Marketing Education program leads to the Bachelor of Science in Education degree and state licensure. The program is designed to prepare outstanding teaching professionals in marketing education by offering a balanced program combining general education, professional education, and marketing content. The provisional vocational license in marketing education in Ohio is valid for teaching marketing subjects to learners ages eight and beyond and grades four and beyond.

Degree Requirements—Marketing Education

Bachelor of Science in Education Degree

General Education Requirements 54

Professional Education Requirements 36–47

ED 221, 223, 301, 303, 321, 323, 327, 429, 432, 440
EDS 333 Learning Differences: Introduction
COM 101 Essentials Public Address
EDT 280 Application Computer Technology

Curriculum Content 104–107

ACC 201, 202
EC 201, 202, 203
EDT 204, 206, 207, 208, 209, 211, 280, 305, 306, 335, 433, 440
ENG 330 Business Writing
LAW 350 Legal Environment of Business
MGT 302 Management and Organization Business
MKT 301, 302, 303, 421, 446, 461
VOE 401, 406, 407, 421, 426, 431, 465, 469

Total (minimum requirement) 192–209

Mathematics Education
See Mathematics Education program in the College of Science and Mathematics.

Modern Languages Education
See Modern Languages in the College of Liberal Arts.

Middle Childhood Education

Pre-Professional Program Middle Childhood B.S.Ed. degree without licensure

Degree Requirements—Middle Childhood Education Grades 4–9

General Education Requirements 46

Area One:
ENG 101, 102 Freshman Composition 8
MTTH 143 Quantitative Reasoning 4

Area Two:
HST 101, 102, 103 The Western World 9
Great Books 3
ENG 204 Literature 3
Fine and Performing Arts (Choose one):
ART 214 Visual Art, MUS 214 Music, TH 214 Theatre

Area Three:
Comparative Studies 3
CST 230 Nonwestern Literature 3
Regional Studies (RST) (Choose one):
260 Asia, 270 Africa, 280 Latin America, 290 Middle East
*Social Studies Concentration: Must choose RST 260

Area Four:
EC 200 Economic Life 3
PLS 200 Political Life 3
PSY 105 Psychology: Science of Behavior 4
SOC 200 Social Life 3
Curriculum Content

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AED 431 Art and the Child</td>
<td>4</td>
</tr>
<tr>
<td>COM 103 Communication for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>COM 152 Mass Communication</td>
<td>3</td>
</tr>
<tr>
<td>ED 421 Literature for Middle Childhood</td>
<td>3</td>
</tr>
<tr>
<td>ED 280 Classroom Applications of Computer-Based Technology</td>
<td>3</td>
</tr>
<tr>
<td>ENG 340 Language for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>ENG 342 Advanced Composition for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>GEO 201 or 202 or 203 Principles of Physical/Cultural/Economic Geography</td>
<td>8</td>
</tr>
<tr>
<td>HED 331 Health Education for Early and Middle Childhood</td>
<td>4</td>
</tr>
<tr>
<td>HPR 260 First Aid</td>
<td>3</td>
</tr>
<tr>
<td>HPR 281 Physical Education for Early and Middle Childhood</td>
<td>4</td>
</tr>
<tr>
<td>HST 211 and 212 American Civilization</td>
<td>6</td>
</tr>
<tr>
<td>MTH 243 and 244 Fundamentals of Mathematics I and II</td>
<td>8</td>
</tr>
<tr>
<td>MUS 365 Methods and Materials for Teaching General Music</td>
<td>4</td>
</tr>
<tr>
<td>Concentrations</td>
<td>49-52</td>
</tr>
</tbody>
</table>

You must choose two of the four concentrations and complete all courses listed under the heading.

| English/Language Arts          | 26      |
| ENG 482 Grammatical Structures of English | 4 |
| COM 365 Issues in Mass Communication | 4 |
| ENG 205 African American Literature | 3 |
| ENG 211 Introduction to Fiction | 3 |
| ENG 303 Short Story Writing or 330 Business Writing or 344 Research Writing | 4 |
| Choose two American Texts:     |         |
| ENG 355 Earlier 19th Century, ENG 356 Later 19th Century | 8 |

- Math
  - MTH 343 Algebra and Functions for Middle School Teachers | 4 |
  - MTH 344 Problem Solving for Middle School Teachers | 4 |
  - MTH 345 Geometry for Middle School Teachers | 4 |
  - MTH 346 Concepts in Calculus for Middle School Teachers | 4 |
  - MTH 446 Mathematical Modeling for Middle School Teachers | 4 |
  - MTT 342 Probability and Statistics for Middle School Teachers | 4 |

- Social Studies
  - HST 214 or 215 African American History | 3 |
  - HST 218 or 219 Ohio History | 3 |
  - HST 445 or 455 or 465 Northeastern History | 4 |
  - HST 470 or 475 or 480 or 485 United States History | 4 |

- Choose one government course: PLS 212, 222, 322, 331, 340, 351, or 371

(Must be a different course than the one chosen to meet content requirements)

- English/Language Arts
- Math
  - Choose one government course: PLS 212, 222, 322, 331, 340, 351, or 371

Any four or more hours from the following:
- GEO 325, 370, 375, EC 201, 202, 203

- Science
  - New courses in the sciences are currently being developed for this program, students will take 4.5 hours in each discipline.
  - CHM 345 Concepts in Chemistry II | 4.5 |
  - PHY 346 Concepts and Applications of Physics II | 4.5 |
  - BIO 346 Concepts in Biology II | 4.5 |
  - GL 346 Earth Systems | 4.5 |
  - SM 445 Projects in Science | 6 |
  - SM 145 Foundations in Scientific Literacy and Problem Solving (Writing Intensive) | 3 |
  - PHY 245* Concepts in Physics | 4.5 |
  - CHM 245* Concepts in Chemistry | 4.5 |
  - BIO 345* Concepts in Biology | 4.5 |
  - GL 345* Concepts in Geology | 4.5 |
  - *Meets General Education science requirements.

Preprofessional Education Courses

- ED 301 School in a Culturally Diverse Society: The Middle Childhood Level Perspective | 5 |
- ED 221 Practicum I (in Middle Childhood Level) | 1 |
- ED 303 Learning and Human Development: The Middle Childhood Level Learner | 5 |
- ED 223 Practicum II (in Middle Childhood Level) | 1 |
- EDS 333 Learning Differences: An Introduction | 3 |

Total: 184-187

Important

The B.S.Ed. in Middle Childhood does not lead to licensure. Students must complete a graduate level program and Praxis II tests in order to be eligible for a license in Middle Childhood. (see sample program)

Please direct any questions to a teacher certification/licensure advisor.

Organizational Leadership

New Bachelor of Science degree completion program in a leadership-focused, multidisciplinary, application-oriented major. Designed for students with a two-year degree or its equivalent who want a broad academic background to prepare them for supervisory and management careers. The major combines courses in communication and management skills with the study of leadership theory and practice. Students will also learn problem-solving techniques and complete a leadership skills project. This integrated major prepares today's and tomorrow's leaders for challenges across all career fields.
Degree Requirements—
Organizational Leadership

Bachelor of Science Degree

General Education 57

Area 1: Communications and Math Skills
ENG 101 Freshman Composition 4
ENG 102 Freshman Composition 4
MTH 145 Math and the Modern World 3

Area 2: The Western Experience
HST 101 Western World 3
HST 102 The Western World in Transition 3
HST 103 The Modern Western World 3
Great Books (choose one) 3
ENG 204 Great Books: Literature
PHL 204 Great Books: Philosophy
REL 204 Great Books: Bible and Western Culture
Fine and Performing Arts (choose one) 3
ART 214 Visual Art in Western Culture
MUS 214 Music in Western Culture
TH 214 The Theatre in Western Culture

Area 3: The Nonwestern World
Comparative Studies (choose one) 3
CST 220 Comparative Nonwestern Environments
CST 230 Comparative Nonwestern Worldviews
CST 240 Comparative Nonwestern Culture
CST 250 Comparative Economics Systems
CSE 250 Comparative Economics Systems
Regional Studies (choose one) 3
RST 260 Regional Studies: Asia
RST 270 Regional Studies: Africa
RST 280 Regional Studies: Latin America
RST 290 Regional Studies: The Middle East

Area 4: Understanding the Contemporary World
PLS 200 Political Life 3
PSY 105 Psychology 4
SOC 200 Social Life 3
EC 200 Economic Life 3
Choose Three Courses: 12
BIO 105, 106, 107
CHM 105, 106, 107
GL 105/115, 106/116, 107/117
PHY 105/115, 106/115, 107/117

Integrated Leadership Focus 19
Choose One
ENG 330 Business Writing
ENG 333 Technical Writing
Choose One
CS 205 Computer Literacy/Office Automation
CS 206 Computer Software/Productivity Tools
CS 207 Advanced Office Productivity
Choose One
PSY 304 Industrial and Organizational Psychology
SOC 350 Sociology of Work

Choose One
COM 101 Essential of Public Address
COM 102 Essentials of Interpersonal Communication
COM 141 Small Group Communication

Choose One
COM 325 Health Communication
COM 340 Effective Listening
COM 343 Communication and Human Relations
COM 443 Interviewing
COM 453 Communication and Conflict

Associate Degree or
Organizational Leadership Electives 70

Open Electives 46
Leadership Focus Area Electives 24

The World of Work (Six Hours from the following areas)
MKT, MIS, FIN, EC, ACC, MGT, MS, AND BUS
The World We Live In (Six Hours from the following areas)
PLS, GEO, and URS
The World of Words (Six Hours from the following areas)
COM, ENG, FR, GER, and SPN
The World of People (Six Hours from the following areas)
SOC, PSY, WMS, and PHL

Organizational Leadership Concentration 48

Prerequisites
ACC 201 Accounting Concepts and Principles I 3
EC 201 Principles of Economics 3
TMK 201 or MGT 200 Elements of Management and Supervision 3

Foundations

Physics Education

See Physics Education in the College of Science and Mathematics.

Political Science Education

See Social Science Education in the College of Liberal Arts.
Psychology/Sociology Education

See Social Science Education in the College of Liberal Arts.

Rehabilitation Services

The rehabilitation services program trains graduates to work in human service agencies that serve people with physical and mental disabilities. The program also prepares students for graduate study in rehabilitation counseling or related areas. Curriculum flexibility attracts students who are interested in developing a program to reflect their special interests. Students must have completed 24 college credit hours and have earned a 2.35 GPA for admission to the program. Students must earn a minimum "C" in each professional rehabilitation course requirement. All students must complete a 400 clock-hour practicum. Prerequisites for the practicum include an overall 2.5 GPA, plus completion of all general education and rehabilitation courses necessary for preparing the student to complete the field experience. (See course description for more detailed information.)

Degree Requirements—Rehabilitation Services*

Bachelor of Science Degree

General Education Requirements 57
Area Four—Natural Sciences
Select BIO 105, 106, 107
Professional Rehabilitation Requirements 60
RHB 201, 202, 301, 303, 304
RHB 401, 402, 403, 404, 407
CNL 461, 467
Related Requirements 44
MGT 200 Elements Management and Supervision 3
Sociology/Anthropology 16
Psychology (Must include PSY 311) 16
COM 101, 102, 141 9
Electives 31

Total 192

* An articulation agreement exists with Sinclair Community College, Clark State Community College, Edison State Community College, Owens Community College, and Columbus State Community College. Graduates of these colleges in the mental health/social services program may apply many of their previous courses to the rehabilitation services program, Bachelor of Science degree.

Minor in Rehabilitation Services

The minor in rehabilitation services requires 34 credit hours: RHB 201, 301, 303, 304, 401, 402, 403 (six credit hours), and 407.

Rehabilitation minors must meet the same GPA requirements for admission to the program and completion of practicum as rehabilitation services majors.

Science Education

See Integrated Science Education in the College of Science and Mathematics.

Social Studies Education

See Social Science Education in the College of Liberal Arts.

Visual Arts Education

See Art and Art History in the College of Liberal Arts.

Vocational Education

The vocational education program prepares teachers from business and industry to teach in one of the five service areas taxonomies. A balanced program of general education, professional education, and study of vocational topics leads to a Bachelor of Science in education degree. Vocational licensure can be earned when the candidate has technical course work and recent related work.
experience. Certification in other areas can be obtained with a dual major option. Teachers who have completed the vocational education 39–42 quarter hour alternative licensure program may apply those hours toward the bachelor's degree.

**Option I—Intensive Vocational Major**

This option is for practicing certificated-licensed vocational teachers who completed or are currently enrolled in the 39–42 quarter hour vocational preservice program and who are seeking a Bachelor of Science in Education. No other licensure will be earned.

**Bachelor of Science in Education Degree**

General Education Requirements 60

Preprofessional and Professional Education Requirements 44–45

- ED 301, 303, EDS 333 13
- EDT 280 Application Computer Technology 3
- VOE 431, 471, 472, 473, 474, 475, 476, 477, 478 24
- VOE 479 Clinical Project 3–6
- ED 458 Practicum in Education 1–9

Vocational Courses 85

All of the following courses must be taken:

- VOE 406, 410, 421, 451, 458 25
- OA 210 Keyboarding 3
- CS 205 Computer Literature and Office Automation 4

Choose from the following to complete major*:


Total (minimum requirement) 192

* VOE 471 may be substituted for VOE 460, 461, 462.
Note: NOCTI test and technical course work may fulfill partial requirements for vocational credits.

**Option II—Dual Certification**

This option is for practicing certificated-licensed vocational teachers who completed or are currently enrolled in the 39–42 quarter hour vocational preservice program and who are seeking a Bachelor of Science in Education and licensure in another teaching area in secondary education. Approximately 45 hours in a second teaching area must be completed to meet licensure requirements.

**Bachelor of Science in Education Degree**

General Education Requirements 60

Preprofessional and Professional Education Requirements 47

- ED 301, 303, EDS 333 13
- EDT 280 Application Computer Technology 3
- VOE 431, 471, 472, 473, 474, 475, 476, 477, 478 24
- VOE 479 Clinical Project 3–6
- ED 458 Select and Org Workforce Curriculum 1–9

Vocational Courses 85

All of the following courses must be taken:

- VOE 406, 410, 421, 451, 458 25
- OA 210 Keyboarding 3
- CS 205 Computer Literature and Office Automation 4

Choose from the following to complete major*:


Total (minimum requirement) 192

* VOE 471 may be substituted for VOE 460, 461, 462.
Note: NOCTI test and technical course work may fulfill partial requirements for vocational credits.

**Option III—Degree with Technical Minor**

This degree is for those students who complete a major (45 hours) in a trade, industrial, health, or technical field who seek a Bachelor of Science in Education and vocational licensure in the specific area of the technical major.

**Bachelor of Science in Education Degree**

General Education Requirements 60

Preprofessional Education Requirements 42

- VOE 402, 403, 404, 405, 411, 431, 460, 461, 462, 466 22
- VOE 429 4–15
- EDT 280 Application Computer Technology 3
- ED 301, 303, EDS 333 13

Vocational Courses* 90

All of the following courses must be taken:

- VOE 406, 410, 421, 451, 458 22
- OA 210 Keyboarding 3
- CS 205 Comp Literature and Office Automation 4

Choose from the following to complete major:

- EDT 436 Pro of Instructional Materials 68

Total (minimum requirement) 192

* A technical major of at least 45 credit hours can be used in the vocational block to complete the content major in vocational education.
Note: NOCTI test and technical course work may fulfill partial requirements for vocational credits.
ENGINEERING AND
COMPUTER SCIENCE
The College of Engineering and Computer Science offers eight undergraduate degree programs to prepare students for professional careers. Six of the seven engineering programs are accredited by the Accreditation Board for Engineering and Technology (ABET). A new program in industrial and systems engineering is pending ABET accreditation. The computer science program is accredited by the Computing Sciences Accreditation Board (CSAB). The programs of study are regularly updated, so students can take advantage of the latest technological advances.

The college is committed to providing an outstanding professional education to its students. This is accomplished by excellence in teaching, research, and service, and by collaborating with business and industry. As part of its commitment to collaborating with industry, the college is dedicated to developing programs important to the region and to making its programs and courses available to part-time and working students.

The undergraduate programs are intended to produce engineers and computer scientists prepared for entry into professional practice or graduate study. The programs provide an understanding of basic science and engineering fundamentals as well as modern professional practice, and also provide good, practical, and hands-on experience obtained from a strong laboratory program and real world problem solving. In particular, the college graduates will have:

- an ability to design a system, component, or process to meet desired needs,
- an ability to use techniques, skills, and modern tools necessary for professional practice,
- an ability to function on multi-disciplinary teams,
- an ability to communicate effectively,
- an understanding of professional and ethical responsibility,
- a knowledge of contemporary issues,
- the broad education necessary to understand the impact of engineering and scientific solutions in a global and societal context,
- a recognition of the need for, and an ability to engage in, lifelong learning.

The college offers master's degrees in engineering and computer science. The college also offers a Ph.D. program in engineering and a Ph.D. program in computer science and engineering.

Students have access to modern laboratories and a wide range of computer systems interconnected by local and wide-area networks. Equipment includes an NCR WorldMark 4800 Data Warehouse; numerous Sun, DEC, and Silicon Graphics file servers and workstations; as well as X-windowing terminals and personal computers. Access is also available to the Ohio Supercomputer through the Ohio Academic and Research Network (OARNet).

**Admission and Advising**

All students interested in earning a degree through the college should apply to Wright State University through the Office of Undergraduate Admissions. When applying, students should indicate their preferred major within the college, if known.

New students are usually assigned to the University College for academic advising. Admission to a degree program in the college is subject to the student's:

1. completing at least 45 quarter credits of college-level work,
2. attaining a cumulative GPA of at least 2.25. Computer science students must attain a cumulative GPA of 2.25 in all computer science and computer engineering courses,
3. completing required core courses in English composition, mathematics, computer programming, and chemistry or physics with a grade of "C" or better in each course.

Students are required to complete the program of study that is in effect at the time of their admission to the college. When they are admitted
to a degree program in the college, students are assigned an academic advisor in the appropriate department. Students should consult with their advisor when first planning their program of study and then at least once a year thereafter to be sure they are following a logical schedule toward graduation.

Transfer students seeking admission to a degree program must have transfer credit equivalent to the first-year requirements for the program and must meet the requirements listed previously. Transfer students who do not meet these requirements will be assigned to the University College or to a preengineering or precomputer science program for academic advising.

Students who return to Wright State University after being absent for four or more quarters must reapply for admission and satisfy the same admission requirements listed above for new Wright State students. These returning students may be required to complete the program requirements that are in effect at the time of their readmission to the college. Their academic records will be reviewed by an advisor who will decide where they will be assigned for academic advising.

Degrees and Areas of Study

Bachelor of Science degrees are offered in biomedical engineering, computer engineering, computer science, electrical engineering, engineering physics, industrial and systems engineering, materials science and engineering, and mechanical engineering. Minors are offered in computer science for engineers and scientists, and materials science and engineering.

Graduation Requirements

To be eligible for the Bachelor of Science degree, students must:

1. complete all of the requirements in one of the college's degree programs.
2. fulfill the university's General Education requirements.
3. complete the residency requirement of 45 credit hours at Wright State University, 30 of which must be earned in courses numbered 300 or above. At least 15 of the last 45 hours of the degree must be taken in residence.
4. complete all academic work with at least a 2.0 cumulative GPA and at least a 2.0 cumulative GPA in all engineering and computer science courses taken at Wright State University.

Students should meet with their academic advisor before their last quarter to be sure they will complete all requirements for graduation.

Honors Program

Honors programs are available in all departments. These honors programs give well-qualified students the opportunity to engage in advanced course work and carry out independent research projects. Students who are interested in an honors program should consult with the chair of the appropriate department. Honors are awarded at graduation.

Cooperative Education

Cooperative education programs are available in all departments. These programs permit students to gain work experience that is relevant to their academic programs. Interested students should contact the Cooperative Education office.

Student Organizations

The college and its departments sponsor a wide variety of student clubs. Involvement in these clubs allows students to develop closer ties with faculty and other students in the same major. It also gives students the opportunity to work in study groups, join professional organizations, gain career information, participate in professional seminars and tours, and attend social activities.

Clubs available to students are the American Institute for Aeronautics and Astronautics (AIAA), American Society of Mechanical Engineers (ASME), ASM International—The Materials Information Society (ASM/TMS), Association for Computing Machinery (ACM), Biomedical Engineering Society (BMES), Human Factors and Ergonomics Society (HFES), Institute of Electrical and Electronics Engineers (IEEE), Institute of Electrical and Electronics Engineers Computer Society (IEEECS), Institute of Industrial Engineers (IE), National Society of Black Engineers (NSBE), Ohio Society of Professional Engineers (OSPE), Society of Automotive Engineers (SAE), Society of Women Engineers (SWE), Student Government, and the Wright Engineering Council (WEC). The Wright Engineering Council promotes communication and cooperation among all of the college clubs and fosters professional and social growth. A college-wide club fair is held annually in the fall to encourage membership. Students may contact the departments or the college office for information on joining any of the clubs.
The college also sponsors the Ohio Mu chapter of the Tau Beta Pi national engineering honor society. Student membership in Tau Beta Pi is based on high academic achievement.

Biomedical and Industrial and Systems Engineering

Professors Gallimore, Hangartner, He, Koubek (chair), Phillips, Rowley
Associate Professors Narayanan, Reynolds
Assistant Professors Harvey, Rothrock

The Department of Biomedical, Industrial, and Systems Engineering offers undergraduate programs in biomedical engineering, and industrial and systems engineering leading to the degrees of Bachelor of Science in Biomedical Engineering or Bachelor of Science in Industrial and Systems Engineering.

Curriculum design changes occasionally to meet educational and accreditation needs. The following curricula are typical; however, students should check with the department for current curriculum guides.

Biomedical Engineering

Biomedical engineering is concerned with solving and understanding problems in biology and medicine by using principles, methods, and approaches drawn from engineering science and technology.

Biomedical engineering students, working in modern teaching laboratories structured around computer-based engineering workstations, receive intensive academic training in engineering design and analysis principles as well as life science concepts. The senior design course brings the course work to bear on actual biomedical engineering problems that help prepare students for employment or graduate study.

The curriculum provides a mix of courses in engineering, life sciences, math, physical science, electronics, control systems, mechanics, and computers, while also stressing communication skills and general education.

Biomedical Engineering Program Objectives

- To provide opportunities to learn the concepts of basic science, biology, and engineering as they apply to the discipline of biomedical engineering
- To provide exposure to the relationships between human/animal systems and basic-science/engineering principles
- To provide opportunities to develop experimental, analytical, computational, and communicative skills
- To provide exposure to the principles of some methods and instruments used in diagnosis and therapy of living systems
- To provide awareness of the multifaceted societal environment with its local and global implications
- To prepare students for employment as biomedical engineers, for admission to medical school, or for admission to graduate school

Current efforts in biomedical engineering include developing medical and surgical instrumentation, designing rehabilitation assistive devices, interfacing complex systems in data collection and analysis, medical imaging, and adapting computer technology to assist people with severe physical disabilities.

Two separate curricula are available. Curriculum A is the regular degree program. Curriculum B is a premedical program that prepares students to apply to medical school. Students who transfer between curricula must complete the final curriculum in total.

The Undergraduate Honors Thesis track provides talented, highly motivated students the opportunity to develop their interests and professional skills by pursuing carefully structured programs of independent study, which culminates in completion of the Undergraduate Honors Thesis.

Graduates may also be qualified to pursue graduate studies in engineering or the life sciences. The department offers a fifth-year M.S. degree program for students completing the B.S. program.

Degree Requirements—Biomedical Engineering

Bachelor of Science in Biomedical Engineering Degree

General Education Requirements: 68

Required Substitutions:
- MTH 229, 230
- Phy 240/200, 242/202, 244/204
Engineering Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BME 195</td>
<td>2</td>
</tr>
<tr>
<td>BME 419-420</td>
<td>20</td>
</tr>
<tr>
<td>BME 470 (w)</td>
<td>3</td>
</tr>
<tr>
<td>BME 461-464</td>
<td>14</td>
</tr>
<tr>
<td>BME 471 (w)</td>
<td>3</td>
</tr>
<tr>
<td>BME 491-493</td>
<td>9</td>
</tr>
<tr>
<td>BME 499</td>
<td>5</td>
</tr>
<tr>
<td>CEG 220</td>
<td>4</td>
</tr>
<tr>
<td>EE 301-302</td>
<td>13</td>
</tr>
<tr>
<td>EGR 190-191 (w)</td>
<td>6</td>
</tr>
<tr>
<td>ISE 212-315</td>
<td>12</td>
</tr>
<tr>
<td>ISE 301</td>
<td>4</td>
</tr>
<tr>
<td>ISE 306 (w)</td>
<td>4</td>
</tr>
</tbody>
</table>

Related Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 112-278</td>
<td>13</td>
</tr>
<tr>
<td>CHM 121-122</td>
<td>10</td>
</tr>
<tr>
<td>MTH 231-233</td>
<td>15</td>
</tr>
<tr>
<td>ISE 499-1</td>
<td>4</td>
</tr>
</tbody>
</table>

Curriculum B additional courses

- CHM 123, 211/215, 212/216, 213/217

Total Curriculum A 205

Total Curriculum B 212

Industrial and Systems Engineering

The Industrial and Systems Engineering program emphasizes the evaluation, design, and improvement of complex systems. These systems can range from using a computer to advanced manufacturing facilities. The program recognizes the central role of the people in such systems, as both operators and beneficiaries, and provides the breadth of knowledge necessary to design systems from a user-centered perspective. Students take a variety of courses across traditional engineering disciplines and in other areas, which may include probability and statistics, optimization, production, engineering economics, computing, operations management, and psychology, depending on area of concentration. The curriculum provides a broad basis, which includes core industrial engineering courses while focusing on the human aspects of systems design.

Program Objectives

- To provide graduates with the tools, knowledge, and problem-solving skills to design, develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy
- To provide graduates with a foundation in mathematics, science, and engineering principles that underpins their profession
- To provide graduates with an understanding of the user-centered design process

- To prepare graduates who can work in a team environment and who can communicate effectively both written and orally
- To provide graduates an understanding of their role as engineers in the context of a global society
- To prepare graduates for professional practice and for admission to graduate programs

The Industrial and Systems Engineering program emphasizes a broad background in user-centered design within an industrial and systems engineering framework. Elective/concentration requirements are provided in order that students may develop a focus area of application. Currently there are four defined tracks in industrial and systems engineering: human integrated systems, information and computer systems, operations management, and undergraduate honors thesis.

Graduates of the program pursue careers in a wide range of settings including manufacturing, health care delivery, information systems, aerospace, consulting, and telecommunications. In addition, students may choose to continue their education in graduate school.

Degree Requirements—Industrial and Systems Engineering

Bachelor of Science in Industrial and Systems Engineering Degree

General Education Requirements

Required Substitutions:
- MTH 229, 230
- PHY 240/200, 242/202, 244/204

Engineering Requirements 94

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BME 419-440</td>
<td>7</td>
</tr>
<tr>
<td>CEG 220</td>
<td>4</td>
</tr>
<tr>
<td>CHM 121</td>
<td>5</td>
</tr>
<tr>
<td>EE 301-302</td>
<td>9</td>
</tr>
<tr>
<td>EGR 190-191</td>
<td>6</td>
</tr>
<tr>
<td>ISE 195-301</td>
<td>46</td>
</tr>
<tr>
<td>ME 212-220</td>
<td>18</td>
</tr>
<tr>
<td>Mathematics/Operations Management/Statistics Requirements 24</td>
<td></td>
</tr>
<tr>
<td>MTH 231-233</td>
<td>18</td>
</tr>
<tr>
<td>MS 306-437</td>
<td>6</td>
</tr>
<tr>
<td>Technical Communications Requirements 3</td>
<td></td>
</tr>
<tr>
<td>EGR 335</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective/Concentration Requirements 15-20

ISE Undergraduate Honors Thesis Track
ISE 499-10, ISE 499-11, three technical electives 17-20
Human Integrated Systems Track

PSY 110; ISE 431, 480; BME 428, one technical elective 17-18

Information and Computer Systems Track/Minor
CS 241, CS 242, MTH 257; CS 400, CS 405 19

Operations Management Track/Minor
MS 331, MS 435, MS 438, MS 439, one technical elective 15

Total 204-209

Undergraduate Honors Thesis Track

The honors thesis track provides talented, highly motivated students the opportunity to develop their interests and professional skills by pursuing carefully structured programs of independent study and research, which culminates in completion of the Undergraduate Honors Thesis.

Human Integrated Systems Track

Through a structured sequence of coursework, this track provides the student with a foundation in both physical ergonomics and human-computer interaction. Students completing this track are typically employed as human factors engineers or continue with graduate studies in the field.

Minor in Computer Science for Engineers and Scientists

Students who successfully complete the concentration area courses for the information and computer systems track and meet departmental requirements will receive a minor in computer science for engineers and scientists. Interested students should apply to be admitted to the minor once they are established in the industrial and systems engineering major and have achieved junior status.

Minor in Operations Management

Students who successfully complete the concentration area courses for the operations management track and meet departmental requirements will receive a minor in operations management from the Raj Soin College of Business. Interested students should apply to be admitted to the minor once they are established in the industrial and systems engineering major and have achieved junior status. Students must be enrolled in the minor in order to be permitted to sign up for courses in the operations management track.

Computer Engineering

Professors Bourbakis, Brandeberry, H. Chen, P. Chen, Garcia (chair), Goshtasby, Jean, Rattan, Sudkamp
Associate Professors Awwal, Chung, Dong, Muteti, Quek, Rizki, Thirunayanan
Assistant Professors Al-Khatib, Cox, Doom, Gallagher, Gutierrez-Osuna, Raymer, Wang
Lecturers Finkelstein, Meyer, Rea, Spiegel, Taylor
Instructors Carl, Findler
Research Assistant Professor Hartrum
Adjunct Research Associate Professor Tamburino

The Bachelor of Science degree program in computer engineering is accredited by the Accreditation Board for Engineering and Technology (ABET). The curriculum is carefully designed to provide a modern program, balancing the study of hardware, software, theory, and practice. The program prepares students to be skillful practitioners by combining these studies with a thorough foundation in science, mathematics, and electrical and computer engineering. In addition to offering well-equipped educational laboratories, excellent faculty, and flexible programs for working professionals, the program also affords students with unique opportunities for research in the local area.

Laboratory experience in design, experimentation, observation, implementation, and discovery complement the theoretical portion of the program.

Computer Engineering Program Objectives

- To produce graduates recognized by industrial, government, and academic entities as having a sound, current, and comprehensive education by providing a balanced and integrated hardware and software educational experience that is rich in modern laboratory, project, and design experiences, and which emphasizes teamwork, problem solving, and communication skills
- To prepare and retain students who, upon graduation, will be motivated to pursue lifelong learning, continuing education, and graduate studies, as required by their personal development goals, through a stimulating, broad, and modern educational experience that is well grounded in the mathematical, scientific, and engineering principles, as well as in the fundamental concepts and theory of computing
- To instill in computer science and engineering students a sense of social responsibility, a code of conduct, and ethical values appropriate to the discipline, so that our graduates are valuable
contributors in their societal and professional environments

- To encourage broad participation in our programs by nontraditional students (such as part-time, working, returning, and students with disabilities), and by women and minorities, through accessible facilities and through our scheduling and conduct of late afternoon and evening classes
- To recognize and encourage excellence in faculty teaching, research, and service

Graduates of the computer engineering program are prepared to supervise, design, and implement systems employing computer hardware, software, and firmware.

Degree Requirements—Computer Engineering

Bachelor of Science in Computer Engineering Degree

General Education Requirements 68

Required Substitutions:
MTH 229, 230
PHY 240/200, 242/202, 244/204

Departmental Requirements 51
CS 240, 241, 242, 400, 415 19
CEG 260, 320, 360, 433, 434, 460 24
CEG 402, 453 8

Engineering Requirements 29 or 35
ME 212, 213 8
EE 301/302, 303/304, 321, 322, 331, 332 21
EGR 190, 191 (Incoming freshmen only) 6

Computer Science/Engineering Electives 14 or 20
Incoming Freshmen 14
All Others 20

Electives must be chosen with the consent of an advisor to provide a coherent major concentration and design experience. At least four credit hours of CEG 498, design experience, must be selected.

Mathematics/Statistics Requirements 25
CHM 121 5
MTH 231, 233, 253, 257 16
HPE 301 4

Technical Communications Requirements 3
EGR 335 3

Total 196

Curriculum design changes from time to time to meet educational and accreditation needs. The curriculum outlined is typical; however, students should check with the department for the current curriculum guide. All programs should be planned in consultation with an advisor.

Computer Science

Professors Bourbakis, P. Chen, Garcia (chair), Goshtasby, Jean, McKee, Sudkamp
Associate Professors Awal, Chung, Dong, Mateti, Quack, Rizki, Thirunaranay
Assistant Professors Al-Khatib, Cox, Doom, Gallagher, Gutierrez-Osuna, Hawley (WSU-Lake Campus), Raymer, Wang
Lecturers Finkelstein, Meyer, Rea, Spiegel, Taylor
Instructors Carl, Findler
Research Assistant Professor Hartrum
Adjunct Research Associate Professor Tamburino

The Bachelor of Science degree program in computer science is accredited by the Computer Science Accreditation Commission of the Computing Sciences Accreditation Board (CSAB). The curriculum is carefully designed to provide a modern program, balancing the study of hardware, software, theory, and practice. The program prepares students to be skillful practitioners by combining these studies with a thorough foundation in science, mathematics, and computer science. In addition to offering well-equipped educational laboratories, excellent faculty, and flexible programs for working professionals, the program affords students with unique opportunities for research in the local area. The degree program allows for a second concentration in an area of mathematics, science, business, or the arts.

Computer Science Program Objectives

- To produce graduates recognized by industrial, government, and academic entities as having a sound, current, and comprehensive education by providing a balanced and integrated hardware and software educational experience that is rich in modern laboratory, project, and design experiences, and which emphasizes team participation, problem solving, and communication skills
- To prepare and retain students who, upon graduation, will be motivated to pursue lifelong learning, continuing education, and graduate studies, as required by their personal development goals, through a stimulating, broad, and modern educational experience that is well grounded in the mathematical, scientific, and engineering principles, as well as in the fundamental concepts and theory of computing
Degree Requirements—Computer Science

Bachelor of Science in Computer Science Degree

General Education Requirements 68

Required Substitutions:
MTH 229, 230
PHY 240/200, 242/202, 244/204
(Students pursuing the business program option should substitute EC 201 for EC 200.)

Departmental Requirements 50

CS 240, 241, 242, 400, 415 19
CS 405, 466, 480 6
CEG 255 4
CEG 260, 320, 360, 433, 434, 460 24

Engineering Requirements 0 or 6

EGR 190/191 (Incoming freshmen only) 6

Computer Science/Engineering Electives 14 or 20

Incoming Freshmen 14
All Others 20

Electives must be chosen with the consent of an advisor to provide a coherent major concentration.

Mathematics/Statistics/Science Requirements 19

MTH 231, 253, 257 11
HFE 301 4
CHM 121, or BIO 112, or physics course with PHY 242 or PHY 244 as a prerequisite 4

Technical Communications Requirements 3

EGR 335 3

Elective/Concentration Requirements 24

Choose from one of the computer science program options listed below.

Total 193

Computer Science Program Options

General

Elective/Concentration Requirements 24

Language Requirement 8

English (200 level or above, not including ENG 347 and 405) or foreign language

Additional Electives 16

Sixteen hours from one liberal arts, science, mathematics, or engineering department

* Includes comparative literature, linguistics, modern language humanities, Sign Language, and classics (CHI, CLS, CPL, DN, FR, GER, GR, ITA, JPN, LAT, LI, ML, POL, POR, RHB, RUS, SPN).

Business

Elective/Concentration Requirements 24

EC 202, 203 6
ACC 201, 202 6
MGT 302 3
MKT 301 3
FIN 301 3

Choose one course from MS 203, CS 300, LAW 250, FIN 302, MKT 302, or ACC 203.

Science

Elective/Concentration Requirements 24

MTH, EE** 8–12

Courses from one mathematics, science, or engineering department 12–16


Curriculum design changes occasionally to meet educational and accreditation needs. The curriculum outlined is typical; however, students should check with the department for the current curriculum guide. All programs should be planned in consultation with an advisor.

Minor in Computer Science for Engineers and Scientists

The objective of this minor is to provide students who have a background in engineering or science with a structured and coherent concentration of study in computer science that can be noted on the student's transcript. The program consists of 23 quarter hours covering a basic introduction to computer science; computer mathematics; data structures; and an application area chosen from operating systems, software engineering, or database management systems.
Minor in Computing and Information Technology (CIT)

The objective of the CIT minor is to satisfy the needs of the intelligent and responsible application of computing and information technologies to majors in fields that would not have computer science or computer engineering as their fundamental and exclusive basic orientation, but would want to benefit from the products of applications of the latter two disciplines and their proper use. The minor provides a conceptual foundation as well as a practical application of various computing and information technology skills. At present, this minor is intended to serve the Department of Accountancy.

Certificate in Object-Oriented Programming

The objective of this certificate is to provide an undergraduate experience in object-oriented programming fundamentals for practitioners of programming in other more classical methodologies and practices. It is assumed that students pursuing this certificate will have at least three years of industrial experience in the programming field, and a baccalaureate degree.

Electrical Engineering

Professors: Brandeberry, Chen, Hong, Kazimierzuk, McCormick (Emeritus), Pujara, Rattan, Shenoi, Shaw, Siferd (Emeritus)

Associate Professors: Awval, Bethke, Garber (chair), Hannen (Emeritus), Misre, Xue

Assistant Professor: Doen

The Department of Electrical Engineering offers programs leading to the Bachelor of Science in Electrical Engineering degree (B.S.E.E.) and the Bachelor of Science in Engineering Physics degree (B.S.E.P.). These two engineering programs are accredited by the Accreditation Board for Engineering and Technology (ABET).

Electrical Engineering

Electrical Engineering is the core problem-solving foundation of our technological society. That's because anything involving the movement of electrons falls within the province of electrical engineering. Electrical engineers create, design, build, and improve everyday necessities we now take for granted—from computers to cell phones; from DVD players to digital control systems in modern automobiles; from arrays of sensors and signal and image processors to space-based communications; and from advanced manufacturing robots to hybrid electric cars. Electrical engineers also design, test, and fabricate the integrated circuit chips that make virtually all these devices possible.

The Department of Electrical Engineering offers students a number of programs leading to a variety of degrees geared to a wide range of interests and career needs. Fully ABET-accredited Bachelor of Science degrees are offered in the core discipline of electrical engineering, or in the more specialized area of engineering physics. Two graduate degrees are also available: a Master of Science in Engineering with a major in electrical engineering, and a unique interdisciplinary Doctor of Philosophy degree in Engineering.

Electrical Engineering Program Objectives

- To prepare students for employment as electrical engineers
- To prepare students for success in graduate studies
- To prepare students to solve real world engineering problems using modern electrical engineering analysis and design techniques
To offer a curriculum and schedule of classes so that both traditional and part-time working students can complete degree requirements.

To offer a program that is recognized for the quality and strength of the laboratory component.

Required courses in electronic circuits, control theory, communication theory, and electromagnetic theory give the student an overview of the electrical engineering discipline. At least one elective design sequence in either control systems, electronic systems, communication systems, electromagnetic systems, or design projects with industry is required to provide strength and depth for each graduate. For example, two required courses in electronic circuits lead to a four-course elective sequence culminating in a very large scale integrated (VLSI) circuit design project. Similarly, the required course in control theory leads to analog and digital controller design courses. In the capstone course, students design and test control circuits.

Degree Requirements—
Electrical Engineering

Bachelor of Science in Electrical Engineering Degree

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>68</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101, 102</td>
<td>8</td>
</tr>
<tr>
<td>Social Science and Humanities</td>
<td>34</td>
</tr>
<tr>
<td>Required Substitutions:</td>
<td></td>
</tr>
<tr>
<td>MTH 229, 230</td>
<td>10</td>
</tr>
<tr>
<td>PHY 240/200, 242/202, 244/204</td>
<td>16</td>
</tr>
<tr>
<td>Engineering Requirements</td>
<td>70</td>
</tr>
<tr>
<td>EGR 190, 191</td>
<td>6</td>
</tr>
<tr>
<td>ME 212, 213; CEG 221*, 411</td>
<td>16</td>
</tr>
<tr>
<td>EE 140, 260, 301/302, 303/304, 321, 322</td>
<td>24</td>
</tr>
<tr>
<td>EE 331/332, 345, 413/414, 421, 425, 431/432</td>
<td>24</td>
</tr>
<tr>
<td>Related Course Requirements</td>
<td>33</td>
</tr>
<tr>
<td>CEG 220</td>
<td>4</td>
</tr>
<tr>
<td>MTH 231, 232, 233, 253</td>
<td>18</td>
</tr>
<tr>
<td>STT 363 or ISE 301, CHM 121, EGR 335</td>
<td>11</td>
</tr>
<tr>
<td>Technical Elective†</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Electives‡‡</td>
<td>24</td>
</tr>
</tbody>
</table>

Design Sequence I—Electronic Systems
EE 444 or 449, 451, 454, 455  16

Design Sequence II—Control Systems
EE 415/416, 417/420, 418 12

Design Sequence III—Communication/Signal Processing
EE 435, 436, 476 12

Design Sequence IV—Electromagnetics
EE 346, 446, 448 12

Design Sequence V—Design Projects with Industry
EE 499 (3 quarters) 12

Total 198

* ME 315 may be substituted for CEG 221
† The Technical Elective course is to be selected from those courses numbered 200 and above in either the College of Engineering and Computer Science, the College of Science and Mathematics, or the Raj Soin College of Business, and approved by the advisor. Redundant courses such as MTH 229 and co-listed courses may not be used as the Technical Elective course.
‡‡Engineering elective courses (24 credit hours required)
Students must select one of the five design sequences listed above as part of their engineering electives. The remaining electives must be selected from those courses numbered 300 or above in the College of Engineering and Computer Science and approved by the advisor. At least 20 of the 24 credit hours must be from electrical engineering courses. Students desiring to complement electrical engineering skills with an increased emphasis on computer science may choose a minor in computer science for engineers and scientists. Those choosing the computer science minor will substitute CS 240 and CS 241 for CEG 220 and CEG 221. This minor is based on programming theory, C and C++ languages, data structures, and an application area chosen from operating systems, software engineering, or database management systems.

Engineering Physics

Engineering physics is an interdisciplinary program offered jointly by the Department of Electrical Engineering and the Department of Physics. This program emphasizes engineering science and basic physics as applied to the design of processes, systems, and devices. The program is designed to prepare students for employment in engineering with emphasis on research and development; to do graduate study in either physics or engineering; and to use modern engineering, scientific analysis, and design techniques. The engineering physicist is typically a link between laboratory scientists and production engineers.

The curriculum contains a core of practical mathematics and computer usage, as well as basic science and engineering science to prepare the student for graduate work. Additional courses in solid state, lasers, electro-optics, transducer instrumentation, and signal communication provide excellent background for industrial or governmental research and development (R&D) work. Opportunities for graduates include laser systems development, detector systems development, device design, computer chip design, materials development, detector systems development, avionics, aerospace
engineering, superconductivity, environmental science, and management.

A final design project is required of all students, providing unmatched experience for work in research and development. The favorable faculty to student ratio in this program allows students to pursue independent design projects under faculty supervision, frequently utilizing industry or governmental laboratories. These hands-on projects give students experience, better equipping them for employment in today's competitive job market.

**Engineering Physics Program Objectives**

- To prepare students for employment in the engineering profession with emphasis on research and development
- To prepare students for success in graduate studies
- To prepare students to solve real-world engineering problems using modern engineering analysis and design techniques
- To offer a curriculum emphasizing physical science to produce engineering physicists capable of combining theory with analysis and design to solve practical engineering problems.

### Degree Requirements—Engineering Physics

#### Bachelor of Science in Engineering Physics Degree

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Requirements</td>
<td>68</td>
</tr>
<tr>
<td>ENG 101, 102</td>
<td>8</td>
</tr>
<tr>
<td>Social Science and Humanities</td>
<td>34</td>
</tr>
<tr>
<td>Required Substitutions: MTH 229, 230</td>
<td>10</td>
</tr>
<tr>
<td>PHYS 240/200, 242/202, 244/204</td>
<td>16</td>
</tr>
<tr>
<td>Engineering Requirements</td>
<td>50-51</td>
</tr>
<tr>
<td>EGR 190/191</td>
<td>6</td>
</tr>
<tr>
<td>PHYS 420</td>
<td>3-4</td>
</tr>
<tr>
<td>(ME 315 may be substituted for PHY 420)</td>
<td>6</td>
</tr>
<tr>
<td>EE 301/302, 303/304, 321, 322, 331/332</td>
<td>21</td>
</tr>
<tr>
<td>EE 413/414, 415/416, 421</td>
<td>12</td>
</tr>
<tr>
<td>EE 494</td>
<td>8</td>
</tr>
<tr>
<td>Physics Requirements</td>
<td>27</td>
</tr>
<tr>
<td>PHYS 260, 316, 371, 372, 450, 451, 452, 461</td>
<td>27</td>
</tr>
<tr>
<td>Related Course Requirements</td>
<td>32</td>
</tr>
<tr>
<td>CHM 121, 122</td>
<td>10</td>
</tr>
<tr>
<td>CEG 220 or CS 240</td>
<td>4</td>
</tr>
<tr>
<td>MTH 231, 232, 233, 253</td>
<td>18</td>
</tr>
<tr>
<td>Technical Electives*</td>
<td>20</td>
</tr>
</tbody>
</table>

*Technical Elective courses are to be selected from those numbered 200 and above in either the College of Engineering and Computer Science, the College of Science and Mathematics, or the Raj Soin College of Business, and approved by the advisor. Redundant courses such as MTH 228 and co-listed courses may not be used as Technical Elective courses.

**Total (minimum hours required)** 197-198

### Mechanical and Materials Engineering

*Professors* Dadras (Emeritus), Grandhi, Hankey (Emeritus), R. Srinivasan, J. Thomas

*Associate Professors* Bethke (chair), Cornelius, Lieb, Mukhopadhyay, Slater, S. Thomas, Wolf

*Assistant Professors* Amer, Friar (Emeritus), Klingbeil, Menart

The Department of Mechanical and Materials Engineering offers undergraduate programs in mechanical engineering and materials science and engineering. Both programs are accredited by the Accreditation Board for Engineering and Technology (ABET). These programs cover traditional engineering fundamentals and develop the skills for modern engineering analysis and design, laboratory and computer experience are integrated throughout the curriculum. Most required courses are offered in both day and evening sections at least once a year.

### Mechanical Engineering

Mechanical engineering is a modern, creative discipline encompassing a wide variety of technical activities. The field is changing rapidly with the progress of the computer era, but the key element that links all of the activities within mechanical engineering is design. The design function is now largely computer-based and involves modeling, simulation, analysis, and synthesis.

Historically, mechanical engineering includes two principle stems. One stem concerns heat, fluids, and energy. Engineers who study combustion in a turbine engine or aircraft lift and drag are practicing in this area. The other stem concerns force and motion in mechanical systems. Problems here include determining robot trajectories, analyzing vibrations to minimize noise, or predicting the stresses in a rotating disc.

The curriculum includes advanced course work in mechanics, thermal sciences, fluids, materials, electronics, mechanical systems, and design.
Mechanical Engineering Program Objectives
- To provide a quality educational experience that prepares our mechanical engineering students for successful entry into the engineering profession, to pursue graduate study, and to stimulate lifelong learning
- To provide a solid foundation in mathematics, basic and engineering sciences, computer application, laboratory techniques, and their use in solving mechanical engineering problems
- To provide broad and significant experience in engineering design, enhance communication skills, and provide the opportunity to work in collaborative groups
- To provide these educational opportunities in modern facilities at competitive cost to a variety of qualified individuals, including part-time and evening students

Degree Requirements—
Mechanical Engineering

Bachelor of Science in Mechanical Engineering Degree

General Education Requirements 68

Required Substitutions:
MTH 229, 230
PHY 240/200, 242/202, 244/204

Engineering Requirements 97
EGR 153, 190, 191; ME 199
ME 202, 212, 213, 220
ME 313, 315, 316, 317, 318, 370, 371
ME 408, 414, 415, 460, 490, 491
EE 301/302, 321, 401/402, 413/414

Related Course Requirements 30
CHM 121 5
MTH 231, 232, 233, 253 18
STT 363 3
CS 316 4

Technical Electives* 10

These courses to be selected from an approved list.

Total 205

*Technical Electives are listed on the mechanical engineering program guide available in the department office.

Materials Science and Engineering

Materials science and engineering has evolved over the last 25 years from metallurgical engineering, polymer chemistry, and ceramic science. It is increasingly recognized as a key engineering field that opens the door for new developments in other advanced technologies. Over the past several decades, scientists and engineers have successfully developed radically new materials. Examples include lightweight alloys for structural use, composites of high-strength alloys in ductile matrices, semiconductors for electronic devices, and more recently, high-temperature semiconductors. These advances typify the challenge faced by materials engineers—to select, modify, or develop the right materials for new applications and technologies.

The curriculum includes advanced course work in engineering mechanics, materials science, ceramics, metallurgy, polymer science, electric circuits, materials testing, processing, and design.

Materials Science and Engineering Program Objectives
- To prepare our students to successfully enter the engineering profession, to pursue graduate study, and to appreciate the benefits of lifelong learning
- To provide opportunities to learn basic science and engineering concepts and be able to apply them to the field of materials
- To provide the opportunities to understand the relationship between processing, microstructure, properties, and performance of different material systems
- To provide the opportunity to develop analytical, experimental, and computational skills
- To provide these educational opportunities, in both day and evening classes, at a competitive cost to qualified full-time and part-time students

Degree Requirements—
Materials Science and Engineering

Bachelor of Science in Materials Science and Engineering Degree

General Education Requirements 68

Required Substitutions:
MTH 229, 230
PHY 240/200, 242/202, 244/204

Engineering Requirements 98
EGR 153, 190, 191; ME 199
ME 202, 212, 213, 220
ME 313, 315, 370, 371, 375, 376, 385, 386
ME 470, 472, 477, 479, 482, 483, 492, 493
ME 485, 486, 487, 488, 489 (select any two)
EE 301, 302

These courses to be selected from an approved list.
### Related Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121</td>
<td>5</td>
</tr>
<tr>
<td>MTH 231, 232, 233, 253</td>
<td>18</td>
</tr>
</tbody>
</table>

**Technical Electives**: 14

These courses to be selected from an approved list.

**Total**: 203

*Technical Electives are listed on the materials science and engineering program guide available in the department office.*

---

### Minor in Materials Science and Engineering

Engineering and nonengineering students may earn a minor in materials science and engineering (MSE), in addition to their major, by completing 45 hours of course work as specified below. Thirty-four hours of core courses are required and 11 hours of elective courses may be selected from the list of approved courses. The elective courses permit a student to tailor his or her particular minor program by choosing courses that concentrate on a specific aspect of materials science and engineering, or selecting courses that complement the student's major. Those students who complete the 45 credits with an average grade “C” or higher will receive the designation of “Minor in Materials Science and Engineering” on their transcript when they graduate. Minor course credits may also be used to satisfy the requirements of the major field, if allowed.

**Minor Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 212, 213, 313, 315</td>
<td>34</td>
</tr>
<tr>
<td>ME 370, 371, 375, 376, 477</td>
<td>11</td>
</tr>
</tbody>
</table>

**Elective Courses**: To be selected from an approved list available in the department office. 209 Russ Center.
LIBERAL ARTS
Admissions and Advising

B.A. and B.S. Programs

To enter a B.A. or B.S. program in the College of Liberal Arts students must have a minimum cumulative GPA of at least a 2.0, and a minimum of 24 credit hours completed including ENG 101 and 102 (with a grade of “C” or better in both), HST 101, and two other General Education courses.

In addition, students must be accepted into a major program. Some programs have additional, more stringent admission requirements.

B.F.A. Programs

Students may enter the college’s B.F.A. programs with a minimum of 24 credit hours. In addition to general university requirements, many of these programs also require auditions, interviews, or portfolio reviews.

B.Mus. Programs

Students enter the college’s B.Mus. program as freshmen and must successfully complete an audition in a major performance area.

Returning Students

Students who return to Wright State after an absence of four or more quarters must reapply for admission and satisfy the admission requirements listed above. Students who return after eight or more quarters’ absence will have to complete the program requirements that are in effect when they are readmitted to the college.

Advising

Students majoring in liberal arts degree programs receive advising from the Liberal Arts Advising Office and from a major advisor. The Liberal Arts Advising Office is responsible for university and college requirements; the major advisor is responsible for program requirements. The Liberal Arts Advising Office sends out a check sheet, which charts a student’s progress toward the bachelor’s degree at two points in the student’s career: when the student enters the college and when the student achieves senior standing. Students should consult their major advisor frequently, but especially when they enter a program and when they receive their senior check sheet.
Degrees and Areas of Study

The Bachelor of Arts

The Bachelor of Arts degree provides the broadest educational program. Building on the General Education Program, it requires study of a foreign language and research methods combined with concentrated study in a single major area. Elective courses give students a chance to explore subjects of personal interest or to take courses that improve their employment prospects. These majors prepare students for careers in fields such as communication, foreign service, government, journalism, teaching, writing and editing, and social work. Liberal Arts programs are also excellent preprofessional training for law, medicine, and business, and all of them provide preparation for students interested in pursuing graduate study.

Programs leading to the B.A. degree are offered in African and African American Studies, anthropology, art, art history, classical humanities, communication studies, economics, English, French, geography, German, Greek, history, integrated language arts, international studies, Latin, mass communication, modern languages, motion picture studies, music, organizational communication, philosophy, political science, religion, selected studies, social and industrial communication, social science education, social work, sociology, Spanish, theatre studies, urban affairs, and women's studies.

The Bachelor of Science

As an option to the B.A., the Bachelor of Science degree stresses training in mathematics, statistics, and computer skills. There is no foreign language requirement. The College of Liberal Arts offers the B.S. degree only in geography and urban affairs.

The Bachelor of Fine Arts

The Bachelor of Fine Arts degree offers intensive, specialized training designed to prepare students for a professional career in the fine and performing arts with a special emphasis on performance and studio work. The B.F.A. is offered by the Department of Art and Art History, as well as by the Department of Theatre Arts, which offers programs in dance, motion picture production, acting, acting—musical theatre, and design/technology/stage management. The B.F.A. degree is also available through the Selected Studies Program.

The Bachelor of Music

The Bachelor of Music degree is designed to provide professional training in music. It is a concentrated, narrowly focused program offering specializations in performance, music education, and music history and literature.

Interdisciplinary Study

The College of Liberal Arts offers interdisciplinary majors in international studies, selected studies including women's studies, urban affairs, social and industrial communication, and social science education. Interdisciplinary courses are offered by various departments.

Degree Requirements

All students must complete the program requirements of the major to which they have been admitted. In addition, to be eligible for a bachelor's degree from the College of Liberal Arts, students must:
1. fulfill the university General Education requirements.
2. complete the residency requirement of 45 credit hours at Wright State. At least 15 of the last 45 hours for the degree must be taken in residence.
3. complete at least 192 credit hours with at least a 2.0 cumulative GPA. No more than eight hours of physical education courses apply toward a degree.
4. complete at least 100 credit hours of work within the college.
5. complete at least 60 credit hours in upper division courses (those numbered 300 and above). At least 30 of these must be taken at Wright State.
6. complete the required writing intensive course components, both in General Education and the major.

Additional Requirements for the B.A. Degree

Foreign Language and Research Methods

Students working toward the B.A. degree must complete a block of courses in foreign language and in research methods.

Foreign Language. Students must demonstrate proficiency in a foreign language at the 202 level or American Sign Language at the 230 level, either by satisfactorily completing course work or by taking an examination. For proficiency exams in French, German, and Spanish, consult the Department of Modern Languages. For proficiency
exams in Greek or Latin, consult the Department of Classics. Those interested in American Sign Language should contact the Department of Human Services in the College of Education and Human Services. Other languages are acceptable, subject to approval by the Liberal Arts Advising Office.

Students who are continuing a language that they began studying elsewhere need to be placed at the appropriate level. For placement in French, German, and Spanish, contact the Department of Modern Languages. For placement in Greek and Latin, contact the Department of Classics.

Research Methods. Students must complete a block of three courses in research methods, one each in computers, logic, and statistics and methodology. For details, consult the Liberal Arts Advising Office or a major advisor.

Maximum Credit Hours in Major

Except in unusual circumstances, students completing the B.A. or B.S. degree may count no more than 68 hours of courses in their major department toward the 192 hours required for graduation. Exceptions must have the prior approval of the dean of the college or of the college petitions committee.

Minors

A minor program provides students with a structured concentration of study in a second area of specialization; the minor work is noted on students' permanent university records. A minor typically requires about half the hours required in a major program. Minors are available in African and African American studies, anthropology, classical humanities, communication, economics, English, French, geography, German, history, music, philosophy, political science, religion, sociology, women's studies, Spanish, and urban affairs. Minors are described in the department program sections of this catalog. For more information contact the appropriate department office.

Students who wish to combine the breadth of a major in the College of Liberal Arts with a general foundation of business courses may use their elective hours to earn a business minor. This program consists of a core of courses that satisfy most of the course prerequisites for the Master of Business Administration program at Wright State. (See page 149 for further details.)

Honors Program

Seniors can earn honors at graduation by participating in a departmental honors program. Designed for students capable of superior work, honors programs are available in anthropology, art history, classics, communication, English, geography, history, modern languages, motion pictures, music, philosophy, political science, religion, social work, sociology, urban affairs, and women's studies. Honors programs usually involve intensive independent study under the direction of a faculty mentor over a period of two or three quarters. For more details, contact the appropriate department office.

Cooperative Education Program

A number of departments in the College of Liberal Arts offer students an opportunity to earn academic credit for relevant work experience through the cooperative education program. Co-op students can apply classroom learning in work settings, explore potential career fields, and gain practical experience that improves employment prospects after graduation.

A maximum of 16 hours of cooperative education credit can be counted toward a bachelor's degree. For more information, contact the departments of art, communication, economics, English, geography, history, political science, social work, sociology/anthropology, and theatre or the Women's Studies Program. A cooperative education advisor in the Career Services office can provide more details.

Teacher Licensure

The College of Liberal Arts offers several degrees that prepare students interested in achieving an Ohio teaching license. Bachelor of Arts degrees that prepare students for a graduate licensure program are available in English; Integrated Language Arts, Social Science Education, French, and Spanish. The Bachelor of Fine Arts degree is available for students seeking graduate licensure in Art Education. In addition, completion of the requirements for the Bachelor of Music degree in Music Education will lead towards a teaching license.

Students interested in licensure programs must be advised by a major advisor in the College of Liberal Arts. Before applying to a graduate licensure program, students should schedule a conference with an education advisor to review program admission and degree requirements.

Student Organizations

Within the college, departments sponsor a wide variety of student clubs and honor societies. Involvement in these organizations allows students to develop closer ties with the faculty and other students in the same major. In addition, it gives students the opportunity to join professional
organizations, gain career information, and participate in professional and social activities. Interested students should contact departmental faculty for details.

African and African American Studies

Program Director: Paul R. Griffin

African and African American Studies (AFS) is an interdisciplinary program that provides students with the opportunity to explore the heritage and contributions of Africans and African Americans to world civilizations and cultures. Students within this major will: (1) develop effective critical thinking and communication skills; (2) explore teaching and research interests in African and African American experiences in Africa, the United States, and throughout the African Diaspora; and (3) participate in related applied and practical experiences beyond the classroom through a service learning internship.

Students who wish to engage in more concentrated study within the major are able to design an appropriate course of study through directed readings and independent study with the permission of the program director and a professor in the program.

Students seeking admission to the major must possess an overall GPA of 2.5. To graduate with a degree in African and African American Studies, students must complete—in addition to university and college requirements—a total of 59 credit hours of department requirements and maintain a grade of “C” or higher in all AFS classes. At least 30 credit hours in the major must be at the 300-level or above.

Degree Requirements—African and African American Studies

General Education Requirements 57

Department Requirements 59

AFS 200, 300, 400, 401*; ATH 447; COM 102; EC 326, 330; ENG 205; HST 214, 215, 475; MUS 391; PLS 364; REL 235, 246, 435

* The senior research project is completed over two quarters, 2.0 each quarter.

Foreign Languages and Research Methods Requirements 24-32

Electives 44-52

Total 192

African and African American Studies Minor

The African and African American Studies minor offers students an opportunity to bring a scholar’s mind to the study of Africa and the African Diaspora (the spread of people of African descent throughout the world). An interdisciplinary curriculum enables students to gain a diverse perspective about African and African American cultures.

The minor complements all of Wright State’s undergraduate majors. It also facilitates the development of a global view that is essential for living in an increasingly multicultural society. The minor particularly promotes an understanding of African and African American humanity, heritage, and contributions to world civilization.

Requirements for the minor can be fulfilled by selecting from course offerings in anthropology, art, economics, history, literature, music, political science, religion, social work, sociology, and theatre. A minimum of 20 hours is required, generally consisting of six courses from three areas: humanities (two-three courses), social sciences (two-three courses), and fine arts (one-three courses). Students must have a 2.0 GPA to enter the program and receive a grade of “C” or above in all course work taken toward the minor.

Anthropology

See Sociology and Anthropology.

Art and Art History

Professors: Cantelupe (Emeritus), Caron (chair), Geibert, Macaulay

Associate Professors: Fitch, Kiser (Emeritus), Koerlin (Emeritus), Leach, McDowell (Emeritus), Must (Emeritus), Nathanson, Vito, Park

Assistant Professors: Cebulash, Peck, Peterson

The Department of Art and Art History offers programs leading to the Bachelor of Arts and the Bachelor of Fine Arts degrees, with courses in art education, art history, drawing, painting, photography, printmaking, and sculpture; a dual B.A. degree combining art history and studio courses is also available. The B.A. degree is designed for students who wish to combine a liberal education with specific studies in art. The B.F.A. degree is
Designed for students who wish to pursue a more intense professional studio program. Students who wish to teach art in Ohio public schools can pursue the B.F.A. degree in art education. After completion of this undergraduate degree program in the College of Liberal Arts, students then need to complete the Professional Educators Program (PEP) Master of Education degree (M.Ed.) through Wright State’s College of Education and Human Services. Graduates of the B.F.A. in art and the Professional Educators Program are then eligible to seek licensure from the Ohio Department of Education in Visual Arts Pre-K-12.

Requirements for admission to the PEP program include a minimum GPA, admission testing, and interviews. Throughout their undergraduate work, students should consult regularly with an advisor in the College of Education and Human Services to ensure that they are meeting requirements of the PEP program.

Because self-expression and self-learning are the ultimate goals of the program, students are largely responsible for determining the options that best meet their individual needs and interests. Candidates for a degree in art may prepare for graduate study, careers in teaching, or the professional practice of art.

In the studio area, studies begin with introductory courses in drawing, sculpture, and photography. These courses are designed for the beginning artist and guide the student’s development in the visual arts. The program helps students expand and express their knowledge and grow in self-expression by exploring the processes and language that are basic to all visual arts. Rather than follow a system of independent courses in a given medium or discipline, students investigate issues and ideas in a variety of visual modes.

B.F.A. students are required to have their work reviewed by the entire staff. The B.F.A. review is normally conducted when students have completed between 40 and 60 credit hours in the department. Students who do not meet the basic standards of the department during their first review may petition to have a second review of their work before they complete 84 credits in art. All candidates for the B.F.A. degree must be represented in the senior exhibition.

First-year students are required to submit examples of their work only if they are seeking advanced placement; otherwise, all first-year students in art are admitted to the general curriculum.

### Degree Requirements—Art

#### Bachelor of Fine Arts Degree

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Education Requirements</strong></td>
<td>57</td>
</tr>
<tr>
<td><strong>Departmental Requirements</strong></td>
<td>123</td>
</tr>
<tr>
<td>ART 211, 212, 213 and three additional art history courses</td>
<td>24</td>
</tr>
<tr>
<td>Eight courses, two from each of the following studio areas: painting, printmaking, sculpture, photography</td>
<td>32</td>
</tr>
<tr>
<td>Sixteen credits in drawing</td>
<td>16</td>
</tr>
<tr>
<td>Five additional courses in area of major concentration</td>
<td>20</td>
</tr>
<tr>
<td>Sophomore workshop (ART 200)</td>
<td>1</td>
</tr>
<tr>
<td>Senior seminar (ART 400)</td>
<td>2</td>
</tr>
<tr>
<td>Departmental studio electives</td>
<td>16</td>
</tr>
<tr>
<td>Departmental or related electives</td>
<td>8</td>
</tr>
<tr>
<td>ART 209</td>
<td>4</td>
</tr>
<tr>
<td>Nondepartmental Electives</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>192</td>
</tr>
<tr>
<td>* B.F.A. degree students should enroll in two studio courses each quarter.*</td>
<td></td>
</tr>
</tbody>
</table>

#### B.F.A. Review Minimum Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 211, 212, 213</td>
<td>12</td>
</tr>
<tr>
<td>ART 206, 228</td>
<td>8</td>
</tr>
<tr>
<td>ART 207, 258</td>
<td>8</td>
</tr>
<tr>
<td>ART 208, 378</td>
<td>8</td>
</tr>
<tr>
<td>One additional studio course</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40</td>
</tr>
</tbody>
</table>

### Degree Requirements—Art Education

#### Bachelor of Fine Arts Degree

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Education Requirements</strong></td>
<td>57</td>
</tr>
<tr>
<td><strong>Departmental Requirements</strong></td>
<td>123</td>
</tr>
<tr>
<td>ART 211, 212, 213 and three additional art history courses</td>
<td>24</td>
</tr>
<tr>
<td>Eight courses, two from each of the following studio areas: painting, printmaking, sculpture, photography</td>
<td>32</td>
</tr>
<tr>
<td>Sixteen credits in drawing</td>
<td>16</td>
</tr>
<tr>
<td>Five additional courses in area of major concentration</td>
<td>20</td>
</tr>
<tr>
<td>Sophomore workshop (ART 200)</td>
<td>1</td>
</tr>
<tr>
<td>Senior seminar (ART 400)</td>
<td>2</td>
</tr>
<tr>
<td>Departmental studio electives</td>
<td>16</td>
</tr>
<tr>
<td>ART 215</td>
<td>4</td>
</tr>
<tr>
<td>Departmental or related electives</td>
<td>4</td>
</tr>
<tr>
<td>ART 209</td>
<td>4</td>
</tr>
<tr>
<td>Nondepartmental Requirements</td>
<td>15</td>
</tr>
</tbody>
</table>
ED 221, 223, 301, 303 12
EDS 333 3

Total 195

* B.F.A. degree students should enroll in two studio courses each quarter

B.F.A. Review Minimum Requirements
ART 211, 212, 213 12
ART 206, 228 8
ART 207, 258 8
ART 208, 378 8
One additional studio course 4

Total 40

Degree Requirements—Art
Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 68
ART 211, 212, 213 and one additional art history course 16
Eight courses, two each from four of the following studio areas: drawing, painting, printmaking, sculpture, photography 32
Departmental electives 7
Departmental studio electives 12
Sophomore workshop (ART 200) 1

Language and Research Methods Requirement 24–32
Nondepartmental Electives 35–43

Total 192

Degree Requirements—Art History
Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 68
ART 211, 212, 213 12
One course each from six of the following art history areas: American, ancient-classical, medieval, museology, Renaissance, Baroque, nineteenth century, twentieth century, non-Western, or art theory and criticism 24
Three courses, one each from three of the following studio areas: drawing, painting, printmaking, sculpture, photography 12
Art history electives 12

Total 192

Art History Honors Program

The honors program in the Department of Art and Art History is designed to give students with outstanding academic ability and superior accomplishments in art history the opportunity to complete a program that encourages and recognizes their distinguished efforts. These students may earn an honors degree by completing the departmental major requirements, maintaining a high academic
record, and successfully completing a senior honors project. Students are usually admitted to the program during the fourth quarter prior to graduation. Interested students can obtain information on the honors program from the Department of Art and Art History office.

Classics

Professor Gabbert (chair)
Associate Professors C. King, W. King
Assistant Professor LaForse

The Department of Classics offers majors leading to the Bachelor of Arts degree in classical humanities and in the classical languages of Greek and Latin. The study of the classics is concerned with the civilizations of ancient Greece and Rome. It is the oldest area of study, requiring an understanding of the disciplines of language and literature, art, archaeology, and history to fully appreciate the contributions of Greece and Rome to western civilization.

Requirements for the major in classical humanities are quite flexible, but it is advisable for students to consult with the department to ensure a well-rounded curriculum. An inflexible requirement is the study of Latin or Greek on the college level. The classical humanities student must complete at least 24 hours of language study and become proficient in at least one of the languages beyond the 202 level. A student who has begun language study elsewhere, or who has experienced a lapse of more than one year in the study of the language, will be given a proficiency examination to determine the appropriate placement level. Students may also major in either Greek or Latin: these students will be expected to develop some facility in the nonmajor language.

The major in classical humanities is appropriate for students who have not decided on a specific vocation and who are interested in the humanities. A bachelor's degree in classical humanities is suitable for students who do not plan to extend their formal education beyond the undergraduate level. The major in one of the classical languages is more suitable for students who wish to continue their studies on the graduate level; the areas of ancient history and classical archaeology, as well as classics, are open to them. Students who major in either classical humanities or classical languages will find the bachelor's degree useful in any position for which a liberal arts degree is appropriate.

Early consultation with the Department of Classics is important for students who wish to teach Latin or Greek in secondary schools. They will also need to consult with the College of Education and Human Services for professional licensure requirements.

Degree Requirements—Classical Humanities

Bachelor of Arts Degree

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Requirements</td>
<td>57</td>
</tr>
<tr>
<td>Departmental Requirements</td>
<td>57</td>
</tr>
<tr>
<td>Greek or Latin Language</td>
<td>24</td>
</tr>
<tr>
<td>Classical Humanities Electives</td>
<td>31</td>
</tr>
<tr>
<td>CLS 499</td>
<td>2</td>
</tr>
<tr>
<td>College Research Methods Requirement</td>
<td>12</td>
</tr>
<tr>
<td>Electives and Related Courses</td>
<td>66</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>192</strong></td>
</tr>
</tbody>
</table>

Degree Requirements—Greek

Bachelor of Arts Degree

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Requirements</td>
<td>57</td>
</tr>
<tr>
<td>Departmental Requirements</td>
<td>57</td>
</tr>
<tr>
<td>Greek Language</td>
<td>36</td>
</tr>
<tr>
<td>Electives in Classical Humanities and Latin Language</td>
<td>19</td>
</tr>
<tr>
<td>CLS 499</td>
<td>2</td>
</tr>
<tr>
<td>College Research Methods Requirement</td>
<td>12</td>
</tr>
<tr>
<td>Electives and Related Courses</td>
<td>66</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>192</strong></td>
</tr>
</tbody>
</table>

Degree Requirements—Latin

Bachelor of Arts Degree

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Requirements</td>
<td>57</td>
</tr>
<tr>
<td>Departmental Requirements</td>
<td>57</td>
</tr>
<tr>
<td>Latin Language</td>
<td>36</td>
</tr>
<tr>
<td>Electives in Classical Humanities and Greek Language</td>
<td>19</td>
</tr>
<tr>
<td>CLS 499</td>
<td>2</td>
</tr>
<tr>
<td>College Research Methods Requirement</td>
<td>12</td>
</tr>
<tr>
<td>Electives and Related Courses</td>
<td>66</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>192</strong></td>
</tr>
</tbody>
</table>
Clas Sics Honors Program

Superior students may participate in the departmental honors program upon applying to the Department of Classics. They should have a GPA of 3.5 in classics and 3.0 overall, and should have completed a substantial portion (27 to 30 hours) of their major requirements. Interested students should contact the department for further details.

Minor in Classical Humanities

The department also offers a minor in classical humanities. The minor is an appropriate second field for many students. The minor requires a total of 32 hours, with a minimum of 12 hours in the Greek or Latin language, and a minimum of 16 hours in classical humanities courses, eight of which must be at the 300 level or above.

Communication

Professors: De Stephen, Pruett, Rickert, Sayer (chair), Shupe (Emeritus)
Associate Professors: Eakins-Reed (Emeritus), Fetzer (Emeritus), John, Spicer
Assistant Professors: Ganes, Morgan, Rucker, Ruminski, Yi
Lecturers: Alexander-Paul, Baxter

The Department of Communication offers programs leading to the Bachelor of Arts degree. Communication students gain an understanding of human communication through the acquisition of skills in speaking, writing, and critical thinking. The Bachelor of Arts in communication is suitable for students who wish to enter a communication-related career, or for individuals interested in personal development. The department offers majors in mass communication, organizational communication, and communication studies. Study in organizational communication is appropriate for students seeking careers in training and development or other organizational communication specialties. Study in mass communication is appropriate for students interested in journalism, media management and production, and public relations. The communication studies program allows students to select courses from all of the communication majors to meet their specific needs. The Department of Communication, in conjunction with the Department of Sociology and Anthropology, also offers a Bachelor of Arts in social and industrial communication. This degree is designed to provide an understanding of social and communication variables that affect organizational productivity.

Degree Requirements—Communication

Bachelor of Arts Degree

The major in communication is for students interested in personal development or a career in education, industry, government, or the media.

Communication majors are expected to achieve basic proficiency in communication skills and to master the essentials of communication theory. All communication majors must take 11 hours of required courses, as well as a minimum of 44 additional hours in communication. All communication majors are encouraged to participate in communication activities outside the university.

To be admitted as majors, students must have at least a 2.5 GPA.

General Education Requirements 57

Required courses:
COM 101, 102, 200, 400 12
Additional electives in major 43
Foreign Language and Research Methods Requirement 24–32
Electives 48–56

Total 192

Communication Major Curricula

Communication Studies

The communication studies major is designed to develop broadly trained students in the liberal arts. Students are encouraged to develop their abilities as effective communicators and as informed critical receivers. The communication studies major affords students maximum freedom of choice in designing their programs of study and areas of specialization.
Communication Studies Major Requirements

Major Core Requirements:
- COM 141, 152, 333, 335, 401, 449

Electives selected from other courses in the department

Mass Communication

The mass communication major is intended to provide students with an understanding of the workings of the mass media and the impact of mass communication on today's world.

Mass Communication Major Requirements

Major Core Requirements:
- 2 hours of COM 130 or 330 (or LA 203/205/303/305/403/405), 152, 256, 358, 411, 462

Major Core Requirements in Specialization Area

Broadcasting
- COM 253, 360, 460, 464

Print Journalism
- COM 364, 366, 454, 458

Public Relations
- COM 345, 346, 347, 449

Visual Communication
- ART 206, ART 209, COM 364, ENG 347

Electives selected from other courses in the department

Organizational Communication

The organizational communication major is intended to provide students with knowledge, skills, attitudes, and values that permit them to understand the impact of communication, messages, and structures on organizational growth and development.

Organizational Communication Major Requirements

Major Core Requirements:
- COM 141, 152, 446, 447, 448

Major Electives/Choose five from the following:
- COM 343, 345, 346, 347, 432, 441, 443, 445, 449, 451, 453, 455, 457

Electives selected from other courses in the department

Communication Honors Program

The communication honors program provides outstanding students with opportunities to pursue advanced study. To enter the program, students must complete 40 credit hours in communication and have a GPA of 3.5 in the major and 3.0 overall. Departmental honors will be awarded when the student completes the required number of hours for a major in communication, including at least 12 credit hours in approved communication honors courses. Students must complete a departmental honors project and maintain a 3.0 cumulative GPA and 3.5 GPA in communication courses while they are in the honors program.

Minor in Communication

The communication minor is appropriate for students who want to develop additional skill in communication or who feel that an understanding of communication processes will supplement their major. The minor may be especially useful for students in business, computer science, education, and nursing, and students majoring in other areas of the liberal arts.

Requirements

Required Courses
- COM 101, 102, 200, 400

Additional Courses in Communication
- At least 16 hours must be at the 300 level or above

Dance

See Theatre Arts.

Economics

Professors
- Blair, Fichtenbaum, Kumar, Premus, Renas, Sav, Swaney, Treacy (Emeritus)

Associate Professors
- Dung, Olson, Traynor (chair)

Assistant Professors
- Hopkins, Osborne

Lecturer
- Endres

Instructor
- Sylvester (director, M.S. program)

The field of economics covers a broad range of concerns, from practical questions about how a business can improve efficiency, to the more abstract, study of the limits that nature imposes on human populations and natural resources. Economics aims at improving our welfare by understanding how people make decisions when faced with relative scarcity, and by studying the complex relationships among the production, consumption, and distribution of material goods.

The economics program equips students to pursue careers in business and government, or prepares them for graduate study in economics, business, or law. Graduates of the program have achieved success as executives in a wide variety of industries and are employed as professional economists in such areas as urban economics.
workforce and training analysis, business forecasting, school finance consulting, evaluating health and delivery systems, budget analysis, market consulting, government planning, banking, and statistical analysis. Some graduates continue their education in the department's master's program in social and applied economics.

The program outlined here is designed to give students both the background that will broaden their future options and the specific skills necessary to apply economic ideas. This includes the ability to express economic ideas clearly and concisely. To enhance writing skills, students are required to complete 12 hours of writing-intensive courses.

Departmental undergraduate advisors are available to all students who need advice about career goals, as well as about elective courses.

Candidates for a Bachelor of Arts degree with a major in economics are required to take a minimum of 51 credit hours in the Department of Economics. Basic courses are supplemented by economics electives.

Degree Requirements—Economics

Bachelor of Arts Degree

General Education Requirements 63

Required Substitutions:
EC 201, 202, 203

Departmental Requirements 42
EC 201, 202, 203 (counted above) 15
EC 301, 315, 317, 319
Economics Electives 27

Related Requirements 28–29
CS 205 4
MTH 129, 228 8
MS 201, 202, 203 (or STT 264, 265) 8–9

Two upper-division courses in one of the following areas: anthropology, geography, history, philosophy, political science, psychology, sociology, or urban affairs 8

Foreign Language and Research Methods Requirement 16–24

Electives 34–43

Total (minimum requirement) 192

Minor in Economics

Any student in the university may earn a minor in economics. The economics minor consists of a core of three courses in principles of economic theory, which serves as a prerequisite for the 15 hours of elective courses. A grade of "C" or better must be obtained in the EC 201, 202, 203 series. The economics electives will count as business electives for the Bachelor of Science in Business students. Students will be admitted to the economics minor after they have been admitted to their major program. Suggested course concentrations: economic policy and theory, world economy and international trade, business administrative skills, labor economics, political and social issues in economics, monetary economics, urban and regional issues and development, quantitative/statistical skills in economics and business, public sector economics, and historical issues in economics.

English Language and Literatures

Professors Baker (Emeritus), Bracher (Emeritus), Bullock, Cantelupe (Emeritus), N. Cary (Emeritus), Correale, Fleischauer (Emeritus), Harden (Emerita), Howard, Hughes (Emeritus), Hussman (Emeritus), Maner, Pacernick, Pringle, Sammons, Swanson (Emeritus), Whissen (Emeritus)

Associate Professors C. Cary (Emerita), Dobson, Gleason (Emeritus), Guthrie, Hall, Kich (WSU–Lake Campus), Law, Limouze (chair), Loranger, MacDonald, Mack, Milligan, Moliterno (WSU–Lake Campus), Oxindine, Schwartz (WSU–Lake Campus)

Assistants Bemer Johnson, Crusar, Hagen (Emerita, WSU–Lake Campus), MacKleod, Seitz, Sharma, Snyder (Emerita, WSU–Lake Campus)

Lecturers Bertsch, Blakelock, Chesire, Dickey, Rubin, Sayer, Wharton

Instructors Allen, Cornett, Geisel, Harbott, Smith, Strader

The English major provides a balanced program of introductory and advanced work in English and American literature, world literature in English, English language and linguistics, and writing. The program offers students the chance to engage in a major humanistic discipline, the study of literature, which is challenging and enriching in itself. The English major also provides sound professional training for those interested in high school or college teaching, the teaching of English as a second language, business or technical writing, or graduate work, and the program is an excellent background for students entering professional schools or planning business careers.

The English major offers five concentrations (specified below), which have been designed to meet the needs of students with a general interest in
literature and of those with special interests in writing or teaching. Students seeking a strong background in literature, history, theory, and analysis should take the general concentration in English, which combines the historical and critical study of literature with innovative approaches to critical methods, women’s studies, nontraditional literatures, and non-Western literature in English. The concentration in English with an emphasis on creative writing offers students a full series of introductory and advanced creative writing courses. The concentration in English with an emphasis on professional writing gives interested students a strong combination of literature and professional writing instruction, including course work in business and technical writing and journalism. The concentration in English with an emphasis on TESOL (Teaching English to Speakers of Other Languages) provides a combination of advanced work in applied linguistics with training in current methods of language teaching.

Finally, the concentration in English with an emphasis on Integrated Language Arts offers a combination of courses in literature, communication, language study, and pedagogy for students interested in seeking licensure to teach English and language arts in middle school or high school.

In choosing electives, students should try to select, in consultation with the departmental advisor, courses that complement their major interest and form a coherent unit of study, or courses that provide an appropriate career-oriented concentration.

Degree Requirements—English

Bachelor of Arts Degree
General Concentration in English

General Education Requirements 57

English Major Requirements 56
ENG 250, 251 8
ENG 351 or 352; 353 or 354; 355 or 356 or 357; and one more from the ENG 351 through 359 group 16
Four of the following courses:
ENG 410, 420, 430, 440, 450, 460, 470, 480 16
Three additional 300- and/or 400-level courses 12
One course in linguistics (ENG 478 or 479) 4
Foreign Language and Research Methods Requirement 32
Electives 47

Total 192

Concentration in English with an Emphasis on Creative Writing

General Education Requirements 57

English Core Requirements 32
ENG 250, 251 8
ENG 351, 352, 353, or 354 (one course); ENG 355, 356, 357 (one course); and one other course from the ENG 351 through 359 group 12
Two of the following courses:
ENG 410, 420, 430, 440, 450, 460, 470, 480 8
One course in linguistics (ENG 478 or 479) 4

Creative Writing Requirement 24
Two of the following:
ENG 302, 303, 304 8
Two or three courses from the following:
ENG 392, 393 (each course may be taken once or twice) 8–12
One or two courses from the following:
ENG 492, 493 (each course may be taken once or twice) 4–8

Foreign Language and Research Methods Requirement 32

Electives 47

Total 192

Concentration in English with an Emphasis on Professional Writing

General Education Requirements 57

English Core Requirements 32
ENG 250, 251 8
ENG 351, 352, 353, or 354 (one course); ENG 355, 356, 357 (one course); and one other course from the ENG 351 through 359 group 12
Two of the following courses:
ENG 410, 420, 430, 440, 450, 460, 470, 480 8
One course in linguistics (ENG 478 or 479) 4

Professional Writing Requirements 24
Any two of the following:
ENG 330, 333, 334, 334 8
Three courses from the following:
ENG 347, 364, 400, 402, 405, 454, 458, 495 12
One more course from among those listed immediately above

Foreign Language and Research Methods Requirement 32

Electives 47

Total 192
Concentration in English with an Emphasis on TESOL

General Education Requirements 57

English Core Requirements 32
ENG 250, 251 8
ENG 351, 352, 353, 354 (one course): 12
and one other course from the ENG 351 through 359 group
Two of the following courses:
ENG 410, 420, 430, 440, 450, 460, 470, 480 8
One course in linguistics (ENG 478 or 479) 4

TESOL Requirements 24
ENG 481, 482, 483, 484, 485 20
ENG 478 or 479 (whichever was not taken as part of core requirements above) 4

Related Requirement 4
ED 458 or ED 460 4

Foreign Language and Research Methods Requirement 32

Electives 43

Total 192

Integrated Language Arts/English Education

Students who wish to teach English or Language Arts in Ohio public high schools should pursue the B.A. in English with a Concentration in Integrated Language Arts (the curriculum is listed immediately below). Upon completion of this undergraduate degree program in the College of Liberal Arts, students then need to complete the Professional Educators Program (PEP) Master of Education degree (M.Ed.) through Wright State’s College of Education and Human Services. Graduates of the B.A. in English/Integrated Language Arts and the Professional Educators Program are then eligible to seek licensure from the Ohio department of Education in Adolescent/Young Adult Integrated Language Arts.

Requirements for admission to the PEP program include a minimum GPA, admission testing, and interviews. Throughout their undergraduate work, students should consult regularly with their advisor in the College of Education and Human Services to ensure that they are meeting requirements to enter the PEP program.

Concentration in English with an Emphasis on Integrated Language Arts/English Education

General Education Requirements 57

English Core Requirements 32
ENG 250, 251 8
ENG 351, 352, 353, 354 (one course): 12
ENG 355, 356, 357 (one course): 4
Two of the following courses:
ENG 410, 420, 430, 440, 450, 460, 470 8
One course in linguistics (ENG 478 or 479) 4

TESOL Requirements 24
ENG 481, 482, 483, 484, 485 20
ENG 478 or 479 (whichever was not taken as part of core requirements above) 4

Related Requirement 4
ED 458 or ED 460 4

Foreign Language and Research Methods Requirement 32

Electives 32

Total 192

English Honors Program

The honors program in English is designed to encourage and recognize superior academic accomplishments by English undergraduates. With the approval of the chair of the English department and the departmental honors advisor, students who meet the eligibility standards may enter the English honors program before the beginning of their senior year. Students may be admitted to the program on the recommendation of any member of the English department faculty, or students may petition to enter the program. Under the direction of a faculty tutor, students in the honors program will complete an honors project that culminates in their writing an honors thesis or project report. For further information on eligibility and enrollment, students should consult the departmental honors advisor.
Minor in English

The minor in English is designed for students who wish to take a coherent body of courses in English and American literature. The minor combines core courses in literary history and methodology with a selection of advanced studies. Students interested in the minor should consult with the departmental advisor to determine the best courses for their needs.

Requirements

- ENG 250, 251
- ENG 351, 352, 353, or 354 (one course);
- ENG 355, 356, or 357 (one course);
- and one other course from the ENG 351 through 359 group
- Two of the following courses:
  - ENG 410, 420, 430, 440, 450, 460, 470, 480
- Two additional 300- and/or 400-level courses

Certificate Program in Professional Writing

A certificate in professional writing is available to all students who successfully complete six courses from a list of approved writing courses (21–23 hours total). The certificate program can supplement any of the three English concentrations or any other major. The courses in the program prepare students for careers as writers in business and related fields, as journalists, and as editors. Interested students should contact the departmental advisor or the director of writing programs for further information.

Certificate Program in Technical Writing

A certificate in technical writing is available for students with a strong scientific or technical background who wish to learn and practice the writing skills that business and science demand today. Students must complete five courses and an internship, and may take the program as a supplement to any major. Interested students should contact the departmental advisor or the director of writing programs for further information.

Certificate Program in TESOL

The English department offers a certificate program in Teaching English to Speakers of Other Languages. Five courses and a practicum provide the requisite knowledge of linguistics and TESOL theory and methods. Interested students should contact their departmental advisor or the director of TESOL, for further information. For information about the Endorsement in TESOL, the public school credential, interested students should contact the College of Education and Human Services or the director of TESOL.

Geography

See Urban Affairs and Geography.

History

Professors: Becker (Emeritus), Dorn, Haas, Sperter
Associate Professors: Arbagi, Carrafiello, Carlson (WSU–Lake Campus), Garner, Green, Lockhart, Melton, Sherman, Sumser, Vice, Yuan (Emeritus)
Assistant Professor: Engelhardt, McLellan, Meyer, Wachtel (Chair)

The undergraduate major in history exposes students to a broad spectrum of human experience in the past and present, arming them with an understanding of the self and of their relationship to other human beings and to the structure of society. History students are encouraged to further their knowledge of the principal developments and problems of history, and to enrich their understanding of historical evolution through research and writing. Through elective courses in other departments, students gain a broad liberal arts education and enlarge their historical perspective. The history major can thus be used generally by students who wish to be useful members of the community, and specifically by students who seek careers in teaching, journalism, library and archival work, government, politics, law, and business. The program also provides a sound basis for students planning to pursue graduate study.

Students in the history program are assigned an academic advisor who assists them with academic routines, selecting individual courses, and developing undergraduate and postgraduate goals. Students interested in careers in law, public service, journalism, or business should consult with the advisor about departmental programs particularly geared to these fields.

Majors are expected to maintain at least a 2.0 GPA in history for graduation.
Degree Requirements—History

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 50

United States history: 14
HST 211, 212 (six hours)
Upper division (eight hours)

Non-American history 16
Two upper-division courses in European history (eight hours)
Two upper-division courses in third world history (eight hours)

History 301 Research Seminar (four hours) 4
Area of Concentration (Choose upper division courses in either United States, European, or third world) 8
Elective upper division history (eight hours) 8

Related Requirements* 24

Foreign Language and Research Methods Requirement 24-32

Electives 29-37

Total 192

* General Education history courses, HST 101, 102, and 103, are not counted toward departmental requirements.
+ A minimum of 12 hours must be taken in one field, and all related course work must be in consultation with the history department's advisor. Courses taken to meet General Education requirements cannot be counted toward related requirements. A minor field in another department can be taken in lieu of the related requirements with the approval of the department's advisor.

History Honors Program

The honors program allows qualified students to carry out independent research under the guidance of a faculty sponsor. Departmental honors are awarded at graduation based on the student's completing the following: at least one interdisciplinary honors seminar, HST 400 (with a grade of "A" or "B"); a 3.5 GPA in history and a 3.0 GPA in overall course work; and a Bachelor of Arts degree in history. In exceptional cases, certain requirements may be waived by a vote of the departmental curriculum committee. Interested students should consult with the departmental advisor.

Minor in History

The minor in history will benefit students majoring in disciplines such as religion, classics, political science, and literature. Students minorings in history will acquire the historical background and learn the critical and analytical techniques used by historians.

The history minor consists of 30 hours of course work, excluding courses taken for General Education.

Departmental Requirements 30

American history: HST 211, 212 6
Three upper division courses, one each in the following:
American history
European history
Third world history

Twelve hours of upper division course work in an area of the student's choice to be selected in consultation with an advisor.

International Studies

Director: December Green

The international studies major offers students the opportunity to study international politics, culture, and society. The major combines intensive study of a foreign language with an interdisciplinary curriculum of study chosen by a student in consultation with a faculty advisor.

The Bachelor of Arts degree program in international studies consists of three parts: three years of study of one foreign language; the major core courses, which include introductory work in art history, economics, geography, political science, and religion; and work in a specialized track.

The specialized tracks in the international studies major provide six options: international diplomacy, area studies, comparative cultures, international economics, global gender studies, and research/intelligence analysis. The international diplomacy and peace studies track includes courses in political science, communication, and history. The area studies track allows students to focus on a global region (e.g., Africa or Latin America) and includes classes in anthropology, history, humanities, and political science. The comparative cultures track includes courses from anthropology, classics, English, history, humanities, philosophy, political science, and religion. The international economics track focuses on global economic concerns, with supporting work in history, political science, and sociology. The global gender studies track incorporates a gender-analysis approach to diplomacy, area studies, comparative cultures, and international economics. The research/intelligence track combines course work in research methods, ethics, and a variety of disciplines to assist those interested in international affairs to work in data analysis.
Study abroad opportunities in Australia, Chile, Costa Rica, Denmark, England, France, Germany, Ireland, Israel, Italy, Japan, Malta, New Zealand, Scotland, Spain, Thailand, and elsewhere are available through the University Studies Abroad Consortium, of which Wright State is a member. Sister universities in Brazil, China, and Japan also offer cultural exchange programs in the summer. Study abroad and cultural exchange can be arranged through the International Student Exchange Program, E190 Student Union.

Although this is not a requirement for an international studies degree, students will find that studying abroad will greatly enrich their educational experience, as well as expose to a foreign culture and peoples. In order to have adequate language preparation, students interested in studying abroad should design their course of study well in advance of their trip.

Students interested in careers in government, international business, teaching, or journalism should contact the director of the international studies major. The major program also provides sound preparation for students interested in graduate work in law, the humanities, or the social sciences.

Degree Requirements—International Studies

Bachelor of Arts Degree

General Education Requirements 57

Foreign Language and Research Methods Requirements 44

Twelve hours minimum at the 300 level, or demonstrated proficiency at the level of 312, 322, or 325 and three research methods courses.

Major Core Requirements 18

Art History. 1850—Comparative Economics World Geography International Politics World Religions

Major Specialized Track 28–58

Total course work in the core and specialized tracks may not exceed 76 hours. Course work numbered 300 or above should be emphasized. Close consultation with and approval of the major advisor is required.

Choose one:
- International Diplomacy and Peace Studies
- Area Studies
- Comparative Cultures
- International Economics
- Global Gender Studies
- Research/Intelligence Analysis

Total (core and specialized track) 46–76

Electives 15–45

Total (minimum) 192

National Honor Society

International studies majors may become eligible for election to Phi Beta Delta, the honor society for international scholars. For more information, interested students should see the director of the program.

Modern Languages

Professors Garrison (chair), Hye
Associate Professors O’Brien, Petreman
Assistant Professors Caldwell, Halling
Lecturers Douglas, Haritos
Instructors Broughton, Galbraith

The contributions of foreign language study to international understanding and world peace, and the value of language literacy to a liberal education, have long been recognized. The foreign language program combines oral and written proficiency with knowledge of the culture and literary heritage of societies other than our own. The department provides excellent preparation for entrance into many crucial and challenging fields, including the diplomatic corps, foreign trade, government, business, industry, and teaching.

Students should be aware that knowledge of a foreign language alone is often insufficient for many careers. Therefore, the goal should be to combine knowledge of a language with another discipline or skill. A minor, major, or double major (combining a language and some other field) can greatly enhance job opportunities.

Students who wish to teach French, German, or Spanish in Ohio public schools pursue the B.A. degree in the respective major. Upon completion of this undergraduate degree program in the College of Liberal Arts, students then need to complete a graduate level teacher preparation program. They are then eligible to seek licensure from the Ohio Department of Education for the Pre-K–12 Multi-Age License. Currently credentialed teachers may wish to pursue the degree of Master of Education: Classroom Teacher, Modern Languages, through Wright State’s College of Education and Human Services.
Requirements for admission to the teacher education program include a minimum GPA, admission testing, and interviews. Throughout their undergraduate work, students should consult regularly with an advisor in the College of Education and Human Services to ensure that they are meeting requirements of the program.

In addition to major programs in French, German, Modern Languages, and Spanish, the department offers basic courses in Chinese, Danish, Italian, Japanese, Portuguese, comparative literature, foreign cultures, literature in translation, linguistics, and phonetics. Students can also minor in any of the three principal languages (French, German, Spanish) offered by the department.

Placement

Students with up to two years of a foreign language in high school or an average grade of "C" or lower in high school language classes are advised to enroll in FR or GER or SPN 101, 102, 103 for credit.

Students who have studied a foreign language for three or more years in high school and received an average grade of "B" or better should enroll in FR GER, or SPN 201.

Students may take a computerized placement test in the department office to determine the appropriate starting point within the language sequence.

Proficiency

Proficiency credit may be earned in two areas: 300-level conversation courses (4 credit hours) and 300-level composition courses (8 credit hours).

Degree Requirements—French

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 62

FR 201, 202, 203, 311, 312, 313 24
FR 321, 322, 331, 332 16
FR 361 2

French Electives (300- and 400-level courses) 20

College Research Methods 12

Related Requirements 20

CPL 310 4
LI 371 or FR 323 4
ML 301, 302, 303, 304, 305, 306 8
(Students should choose the culture course related to their field plus at least one other culture course.)

ML 311, 312, 313, 314, 315, 316 4

(Students should choose one literature-in-translation course outside their own field.)

Electives 41

Total 192

Degree Requirements—German

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 60

GER 201, 202, 203, 311, 312 20
GER 321, 322, 323, 331, 332 20

German Electives (300- and 400-level courses) 20

College Research Methods 12

Related Requirements 20

CPL 310 4
LI 371 4
ML 301, 302, 303, 304, 305, 306 8
(Students should choose the culture course related to their field plus at least one other culture course.)

ML 311, 312, 313, 314, 315, 316 4

(Students should choose one literature-in-translation course outside their own field.)

Electives 43

Total 192

Degree Requirements—Spanish

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 62

SPN 201, 202, 203, 311, 312 20
SPN 321, 322, 323, or 325 12
SPN 331, 332, 333, 334, 361 18

Spanish electives (400-level courses) 12

College Research Methods 12

Related Requirements 20

CPL 310 4
LI 371 4
ML 301, 302, 303, 304, 305, 306 8
(Students should normally choose the culture course related to their field plus at least one other culture course; however, if they are headed for a teaching career, they should choose both Spanish and Spanish-American culture.)

Electives 4

Total 192
ML 311, 312, 313, 314, 315, 316  
(Students should choose one literature-in-translation course outside their own field.)

Electives  

Total 192

Degree Requirements—Modern Languages

Bachelor of Arts Degree

The degree in Modern Languages is a combination of at least three languages: 36 credit hours in a primary field and 36 credit hours in a secondary field. A primary field is a concentration in French, German, or Spanish; a secondary field is any combination of languages the department offers other than the one selected for the primary field, but at least one of the second languages must be pursued through the 203 level. First-year courses will not be counted toward the primary field but may be used to fulfill the requirements for the secondary field. The primary field must include at least two courses at the 400 level.

General Education Requirements  

Departmental Requirements  
(at least three languages)  

Primary language (example)  
FR 201, 202, 203, 311, 312, 321, 322, 403, 452  

Secondary language (example)  
SPN 101, 102, 103, 201, 202, 203  
GER 101, 102, 103  

College Research Methods  

Related Requirements  

CPL 310  
LI 371  
ML 301, 302, 303, 304, 305, 306  
(Students should choose the culture course related to their field plus at least one other culture course.)  
ML 311, 312, 313, 314, 315, 316  
(Students should choose one literature-in-translation course outside their own field.)

Electives  

Total 192

Cultural Proficiency Requirement

Each student wishing to graduate with a major in the Department of Modern Languages will be required to pass a test based on the department's cultural handbook. This booklet of basic facts about French, German, Spanish, and Latin American culture is presented to all students when they declare a major in the department. The test is given on the first Friday of every quarter and may be taken any given quarter. The minimum passing grade is 95 percent.

Modern Language Minors—French, German, Spanish

A minor in a foreign language greatly enhances a student's career prospects. Minors are offered in French, German, and Spanish and require a minimum of 32 credit hours selected from courses at the 200 level or above (excluding LI 371, FR 361, and SPN 361). A minor in Spanish, for example, might consist of the following courses:

SPN 201, 202, 203  
SPN 311, 312  
SPN 321, 322, 323  

Total 32

A student beginning the program above the 200 level need take only five courses at the 300 or 400 level for minor.

Motion Pictures

See Theatre Arts.

Music

Professors: Bland, Dregalla (chair)

Associate Professors: Booth, Dahlman, Ellis, Larkowski, Laws, Leung, Nelson, Tipps, Warrick

Assistant Professors: Cha, Jagow, Paul, Taylor.

The Department of Music offers a four-year curriculum designed for students who wish to pursue a career in music. As a full member of the National Association of Schools of Music, the department has designed the requirements for entrance and graduation according to the published regulations of that association. The Bachelor of Music degree is offered with majors in performance, music education, and music history and literature; the Bachelor of Arts degree is offered with a major in music. A Master of Music degree with a major in music education and a Master of Humanities degree are also offered. Because of the highly individualized nature of the various programs, students are required to consult with an advisor to plan their major program.

In addition to fulfilling university admissions procedures, prospective music majors must also complete a departmental application for an audition, perform a satisfactory audition in a major
performance area, and meet with an assigned advisor from the music faculty for counseling and registration. Transfer students must submit a transcript of all previous work in addition to completing the above steps. A minimum of one year of full-time study is required of all transfer students working toward a degree.

The department has developed a course of study based on four levels of technical proficiency, musicianship, and repertoire in all areas of applied music. Students should consult regularly with their applied music instructors and advisors to ensure progress through the various levels. Students enrolled in applied music courses are required to attend a specified number of recitals, concerts, and other approved performances. Solo recital performances are also required of music majors. For information regarding applied music requirements and keyboard proficiency requirements, students should refer to the Undergraduate Studies in Music student handbook.

Because of the cost of individual instruction, special quarterly fees are charged for applied music and, in certain cases, for accompanists. Applied music is also available to nonmajors on a limited basis and subject to instructor availability. A rental fee is charged for use of university-owned instruments in class instruction. There is no charge for use of these instruments in university ensembles.

All music degree programs require a minimum number of hours for graduation. A detailed, four-year curriculum outline for each major program is available in the Department of Music office.

All students in the university, as well as members of the community, are eligible to participate in performing groups. Some groups require individual auditions; prospective members should consult the various conductors to arrange auditions. The following instrumental groups are available: University-Community Orchestra, Chamber Orchestra, Concert Band, Wind Symphony, Chamber Players, Pep Band, Clarinet Choir, Saxophone Quartet, Brass Choir, and Jazz Band. Choral groups include the University Chorus, Men's Chorale, Women's Chorale, Chamber Singers, and Paul Laurence Dunbar Chorale. Students majoring in other academic areas and members of the community may also take music courses especially designed for the nonmusic major.

Degree Requirements—Performance

Bachelor of Music Degree

The department offers majors in the following areas of performance: bassoon, clarinet, classical guitar, euphonium or baritone horn, flute, harp, horn, oboe, organ, percussion, piano, saxophone, string bass, trombone, trumpet, tuba, viola, violin, violoncello, and voice. With departmental permission, students may major in fields other than those listed. Students must study continuously in their chosen disciplines until they meet all graduation requirements, including satisfactory public performance of specified recitals during the junior and senior years.

Each music performance major is required to participate in at least one university ensemble related to the student's applied music concentration during each quarter in which the student is enrolled full time. Assignment to an ensemble is made by the director of bands, director of choral studies, or director of orchestral studies; the appropriate ensemble director; and the student's full-time applied instructor. When the student's applied instructor is not a full-time faculty member, approval must be given by the chair of the student's applied board.

To be eligible for the Bachelor of Music degree, the performance major must have a minimum cumulative GPA of 3.0 in the major performing medium and a 2.0 in all other required music courses.

General Education Requirements 58

Required Substitutions:
MUS 121, 122  4
CST 240 (Music in NW Culture)  3

Departmental Requirements 87

Music Theory: MUS 101, 102, 103, 201, 202, 203  18
Sight-Singing: MUS 151, 152, 153, 251, 252, 253  6
Computer Applications, MUS 465  3
Form and Analysis: MUS 342  3
Music History: MUS 311, 312, 313  9
Large Ensemble  12
Applied Music  36

1 As appropriate to instrument/voice and background, as determined by director of bands, director of choral studies, director of orchestral studies (as appropriate) in consultation with a student's applied teacher.
2 Applied Music Credit Hours
Freshman: 2/2/2  Sophomore: 2/2/2

Performance Area Requirements 54–58

Vocal Performance 58

Keyboard: MUS 155, 156, 157, 255, 256, 257, 355, 356, 357  9
Opera: MUS 420 (4 qtrs)  8
Basic Conducting: MUS 335  2
Vocal Pedagogy: MUS 443, 444  4
Vocal Literature: MUS 455, 456, 457  9
Italian  8
German or French  8
Pronunciation of Foreign Language: MUS 261, 262  4
Electives  6
Degree Requirements—
Music Education

Bachelor of Music Degree

Students who major in music education may choose either an instrumental or a vocal-general music curriculum. Upon completing the requirements of the music education program, students are able to apply for teaching licensure. To be eligible for the Bachelor of Music degree, music education majors must have a minimum cumulative GPA of 3.0 in required music education courses and a 2.5 GPA in all other required music courses. An overall minimum cumulative GPA of 2.5 is required.

Students planning to major in music education will be placed in the “Music: Unspecified” category until the following requirements have been met: a) satisfactory completion of MUS 101, 102, 151, 152, 155, 156, and two quarters of applied concentration and ensemble study; b) minimum grade of “C” in applied and ensemble studies for two consecutive quarters; c) no failing grade in music courses during two consecutive quarters; and d) minimum cumulative GPA of 2.5 in total course work after the completion of 30 quarter hours.

Each music education major is required to participate in at least one university ensemble related to the student’s applied music concentration during each quarter in which the student is enrolled full time, with the exception of the quarter in which the student is student teaching. Assignment to an ensemble is made by the director of bands, director of choral studies, or director of orchestral studies; the appropriate ensemble director; and the student's
full-time applied instructor. When the student’s applied instructor is not a full-time faculty member, approval must be given by the chair of the student’s applied board.

Three hundred hours of field observation and clinical experiences are required prior to student teaching.

During the senior year, all students will perform in student recitals two or three times for a total of 25 to 30 minutes. With the approval of the studio teacher and the applied music board, students may present a half recital or a full recital in lieu of this requirement.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Substitutions:</td>
<td></td>
</tr>
<tr>
<td>MUS 121, 122</td>
<td>4</td>
</tr>
<tr>
<td>CST 240 (Music in NW Culture)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Professional Education</strong></td>
<td>28–30</td>
</tr>
<tr>
<td>ED 221, 223, 333, 301, 303, 419, 429, 440</td>
<td></td>
</tr>
<tr>
<td><strong>Departmental requirements</strong></td>
<td>72</td>
</tr>
<tr>
<td>Music Theory: MUS 101, 102, 103, 201, 202, 203</td>
<td>18</td>
</tr>
<tr>
<td>Sight-Singing: MUS 151, 152, 153, 251, 252, 253</td>
<td>6</td>
</tr>
<tr>
<td>Computer Applications: MUS 465</td>
<td>3</td>
</tr>
<tr>
<td>Form and Analysis: MUS 342</td>
<td>3</td>
</tr>
<tr>
<td>Music History: MUS 311, 312, 313</td>
<td>9</td>
</tr>
<tr>
<td>Large Ensemble:</td>
<td>11</td>
</tr>
<tr>
<td>Applied Music</td>
<td>22</td>
</tr>
</tbody>
</table>

1. As appropriate to instrument/voice and background, as determined by director of bands, director of choral studies, director of orchestral studies (as appropriate) in consultation with a students applied teacher.

2. Not taken during the quarter of student teaching.

**Related Requirement**

COM 101                                           | 3     |

**One of the following programs:** 36–38

**Instrumental/Organ**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyboard: MUS 155, 156, 157</td>
<td>3</td>
</tr>
<tr>
<td>Orchestration: MUS 343</td>
<td>2</td>
</tr>
<tr>
<td>Elementary Music Education: MUS 328</td>
<td>3</td>
</tr>
<tr>
<td>Basic Conducting: MUS 335</td>
<td>2</td>
</tr>
<tr>
<td>Instrumental Conducting: MUS 336, 337, 338</td>
<td>6</td>
</tr>
<tr>
<td>Instrumental Music Education: MUS 323, 324, 325</td>
<td>6</td>
</tr>
<tr>
<td>Woodwind Methods: MUS 227, 228</td>
<td>2</td>
</tr>
<tr>
<td>Brass Methods: MUS 224, 225</td>
<td>2</td>
</tr>
<tr>
<td>String Methods: MUS 215</td>
<td>1</td>
</tr>
<tr>
<td>Percussion Methods: MUS 231</td>
<td>1</td>
</tr>
<tr>
<td>Voice Class: MUS 145</td>
<td>1</td>
</tr>
<tr>
<td>Choir</td>
<td>2</td>
</tr>
<tr>
<td>Chamber Music: MUS 205</td>
<td>3</td>
</tr>
<tr>
<td>Electives:</td>
<td>3</td>
</tr>
</tbody>
</table>

1. For keyboard majors, substitute MUS 357 (or proficiency), electives five (instead of three)

**Music History and Literature**

The major in music history and literature is not a terminal degree, and students should expect to continue at the graduate level. Therefore, students should consult with the appropriate faculty advisor before entering.

Students planning to pursue this major will be placed in the “Music: Unspecified” category until the following requirements have been met: a minimum grade of “C” in MUS 121 and completion of MUS 103 and 153.

Students majoring in music history and literature must complete level III in the applied music concentration and pass all keyboard proficiency requirements. Students must maintain a minimum cumulative GPA of 3.0 in required major courses, and 2.0 in other required music courses. Senior students are required to complete a senior project. The project may consist of an extensive written research paper or a scholarly lecture or lecture/recital.
### Degree Requirements—
#### Music History and Literature

**Bachelor of Music Degree**

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>58</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Substitutions:</td>
<td></td>
</tr>
<tr>
<td>MUS 121, 122</td>
<td>4</td>
</tr>
<tr>
<td>CST 240 (Music in NW Culture)</td>
<td>3</td>
</tr>
<tr>
<td>Departmental Requirements:</td>
<td>51</td>
</tr>
<tr>
<td>Music Theory: MUS 101, 102, 103, 201, 202, 203</td>
<td>18</td>
</tr>
<tr>
<td>Sight-Singing: MUS 151, 152, 153, 251, 252, 253</td>
<td>6</td>
</tr>
<tr>
<td>Computer Applications: MUS 465</td>
<td>3</td>
</tr>
<tr>
<td>Form and Analysis: MUS 342</td>
<td>3</td>
</tr>
<tr>
<td>Music History: MUS 311, 312, 313</td>
<td>9</td>
</tr>
<tr>
<td>Large Ensemble*</td>
<td>12</td>
</tr>
</tbody>
</table>

*As appropriate to instrument/voice and background, as determined by director of bands, director of choral studies, director of orchestral studies (as appropriate) in consultation with a student's applied teacher.

<table>
<thead>
<tr>
<th>Area Requirements</th>
<th>87</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Conducting: MUS 335</td>
<td>2</td>
</tr>
<tr>
<td>Introduction to Research: MUS 314</td>
<td>3</td>
</tr>
<tr>
<td>Counterpoint: MUS 301</td>
<td>3</td>
</tr>
<tr>
<td>Orchestration: MUS 343</td>
<td>2</td>
</tr>
<tr>
<td>Advanced Music Literature: MUS 435</td>
<td>15</td>
</tr>
<tr>
<td>Independent Study (Senior Project): MUS 481</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>20</td>
</tr>
<tr>
<td>Applied Music</td>
<td>18</td>
</tr>
<tr>
<td>Electives</td>
<td>12</td>
</tr>
</tbody>
</table>

Plus Either:

- Instrumental/Vocal Track
  - Keyboard: MUS 155, 156, 157, 255, 256, 257 | 6 |

Or

- Keyboard Track
  - Keyboard: MUS 257 | 1 |
- Secondary Voice/Instrument | 5 |

### Degree Requirements—Music

**Bachelor of Arts Degree**

The Bachelor of Arts degree in music is designed for students who want to study music, but do not necessarily plan a professional career in music. Students will get a much broader, more general education than students seeking a Bachelor of Music degree. Required courses are kept to a minimum. Consequently, students must work closely with an advisor in selecting course electives. For graduation, students must complete the 200 level in the applied music concentration.

<table>
<thead>
<tr>
<th>General Education</th>
<th>58</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Substitutions:</td>
<td></td>
</tr>
<tr>
<td>MUS 121, 122</td>
<td>4</td>
</tr>
<tr>
<td>CST 240 (Music in NW Culture)</td>
<td>3</td>
</tr>
<tr>
<td>Departmental Requirements</td>
<td>64</td>
</tr>
<tr>
<td>Music Theory: MUS 101, 102, 103, 201, 202, 203</td>
<td>18</td>
</tr>
<tr>
<td>Sight-Singing: MUS 151, 152, 153, 251, 252, 253</td>
<td>6</td>
</tr>
<tr>
<td>Computer Applications: MUS 465</td>
<td>3</td>
</tr>
<tr>
<td>Music History: MUS 311, 312, 313</td>
<td>9</td>
</tr>
<tr>
<td>Applied Music</td>
<td>12</td>
</tr>
<tr>
<td>Introduction to Research: MUS 314</td>
<td>3</td>
</tr>
<tr>
<td>Large Ensemble*</td>
<td>6</td>
</tr>
</tbody>
</table>

*As appropriate to instrument/voice and background, as determined by director of bands, director of choral studies, director of orchestral studies (as appropriate) in consultation with a student's applied teacher.

Either:

- Keyboard Track
  - Music Electives | 7 |

Or

- Vocal/Instrumental Track
  - Keyboard: MUS 155, 156, 157 | 3 |
  - Music Electives | 4 |

Other Requirements

- Research Methods | 12 |
- Foreign Language (at 202 level) | 20 |
- Electives (as appropriate) to a total of 192 hours | 192 |

### Music Honors Program

The Department of Music encourages students who have demonstrated superior academic ability to participate in the music honors program. In order to enter the program, students must be juniors or seniors with a cumulative 3.0 GPA and a 3.5 GPA in music. For additional information, students should contact the department chair.

### Minor in Music

| Music Theory: MUS 101, 102, 103 | 9 |
| Sight-Singing: MUS 151, 152, 153 | 3 |
| Music History*: MUS 121, 122 | 4 |
| Keyboard: MUS 155, 156, 157 | 3 |
| Applied Music* | 3-6 |
| Large Ensemble* | 6 |
| Music Electives | 6 |

Total | 34-37

*Three quarters

*As appropriate to instrument/voice and background, as determined by director of bands, director of choral studies, director of orchestral studies (as appropriate) in consultation with a student's applied teacher.

*As part of General Education
Philosophy

Professor Taylor (chair)
Associate Professors Hough (Emeritus), Irvine
Assistant Professors Beelick, Farmer

The philosophy major is designed to encourage clear and logical thinking about problems that philosophers attempt to solve. It develops students' ability for critical evaluation through analysis and appreciation of such attempts, and increases students' cultural experience by acquainting them with the more important philosophic writings.

The 52 hour requirement in the major affords a great deal of flexibility; it enables students to employ numerous options in other disciplines to prepare for different professional objectives, while also developing a broad understanding of our society and culture. It is to the major's advantage to pursue courses in other fields, since philosophy, by its very nature, is interrelated with all disciplines. Many academic departments include, within their own curricula, courses in the philosophy of their disciplines. Furthermore, philosophical questions can arise during one's investigation of any specific field.

Because of differences in student interests and the ready availability of electives, each student follows an individualized program in consultation with an advisor. Such a program permits concentration in cognate fields and encourages exploration and self-discovery.

Because the required courses in philosophy are designed to emphasize basic issues confronting our civilization, the philosophy major is excellent preparation for those who seek a well-rounded liberal education; for those who intend to pursue further training in professional disciplines such as law, medicine, and theology; and for those who plan advanced study in philosophy.

Philosophy majors who have demonstrated excellent ability in philosophy courses may be eligible for the rigorous departmental honors program. Interested students may obtain further information from the departmental office.

Degree Requirements—Philosophy

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 52

Language and Research Methods Requirement 24–32

Electives and Related Courses 51–59

Total 192

Minor in Philosophy

The minor in philosophy is a perfect complement to majors in departments throughout the university. Historically, Wright State students studying pre-law, English, mathematics, psychology, pre-med, communication, music, religion, film, and art have taken numerous philosophy courses for their electives. In addition to providing a basic background in the history of philosophy and in logic, the minor allows students to design individualized concentrations in areas such as medical ethics, the philosophy of science, applied philosophy, the philosophy of art and culture, the philosophy of law, or political philosophy.

The minor may be earned by completing the following requirements:

 Philosophy Minor

Required Courses 16

PHL 215, 223 or 323 (4 hrs.)

PHL 301, 302 and 303** (12 hrs.)

Electives 16

* 20 credit hours min. of 300-400 level courses
** Or approved substitutions in the history of philosophy

Political Science

Professors Fitzgerald, Funderburk, Moore, Nord, Schlagheck (chair), Walker

Associate Professors Adams, Green, Sirkin

Assistant Professors Anderson, Snipe

Students of political science study governments: how they evolve, why they exist, the forms and social functions they assume, why they change, and who controls them. To understand governments, students of political science also study politics: how people behave in their relationship to government, what they do to influence government, and how government attempts to influence people's behavior and beliefs about what it does. Students of politics also must appreciate how cultural, historical, and
economic forces affect the evolution of governments and mass political behavior.

The Bachelor of Arts program in political science focuses on three areas of instruction:
1. American government, including legislative and executive institutions, political parties and interest groups, public administration, public opinion and elections, and state and urban government; public law, including constitutional law, criminal justice, civil liberties, and environmental law
2. International relations and comparative politics, including American and Soviet Post-Soviet foreign policy; Western European and Latin American governments; the Middle East, East European, Russian, and Asian governments; African politics; national security policy; terrorism; international political economy; and developing political systems
3. Political philosophy theory and analysis, including feminist theory, political philosophy, political ideologies, the history of political thought, and political analysis; and quantitative methods of political research

Student Internships and Applied Politics

Internships for political science majors may be arranged with area state legislators, congressional district offices, Dayton-area metropolitan governments, and governmental and policy advocacy agencies and organizations in Washington, D.C. These internships complement classroom work and give students the chance to apply knowledge and develop valuable interpersonal and career-related skills. The department sponsors student participation on our nationally recognized, award-winning team attending the annual National Model United Nations meeting in New York.

Degree Requirements—Political Science

Bachelor of Arts Degree

General Education Requirements 57

Foreign Language and Research Methods Requirement 24–32

Departmental Requirements 60

Core Requirements (two courses) 8
Prerequisite: PLS 200, 212, 222

Area Requirements 20

Prerequisite: Core Requirements
1. American Government (two courses, eight hours)
2. International and Comparative Politics (two courses, eight hours)
3. Political Philosophy, Theory, and Analysis (one course, four hours)

Advanced Department Electives 32
Prerequisite: Core Requirements
Thirty-two quarter hours chosen in consultation with a departmental advisor among 300- and 400-level courses with no fewer than four hours at the 400 level

Related Major Requirements from Outside the Department 21–22

There are two options. Option 1 must be completed in full by all political science majors who do not choose and complete in full a departmentally approved alternative of at least 21 credit hours.

Option 1
One English course from among the following: ENG 240, 330, 333, or 344 3–4
HST 211 and 212 6
EC 201, 202, and 203 9
GEO 201 or 202 3

Option 2
Option 2 may be the international economics certificate program, the business minor for liberal arts majors, a minor or second major in another field, or a set of courses from another discipline with a clear focus and coherence reflecting the individual’s career or other interests. Transfer students from Sinclair Community College may apply LAP credits toward “legal affairs” related requirements. Other transfer credits also may be applied toward completion of the requirement.

In all cases, Option 2 must have advisor approval and requires at least 21 credit hours.

Free Electives 21–30

Total (minimum requirement) 192

Minor in Political Science

Students majoring in other fields, particularly other social sciences, may benefit from a minor in political science. The minor is especially helpful to students in journalism, business students interested in international business and finance, students in education, and anyone pursuing a career where a basic understanding of political institutions and processes would strengthen other program interests. Completion of the approved minor is certified on students’ official transcript upon graduation.

The minor may be fulfilled by completing the following requirements.
Religion

Professors: Barr, Griffin, Reece, Taylor (chair)
Associate Professors: Chamberlain, Verman

The Bachelor of Arts program in religion is comprehensive and nonsectarian in its approach, and shares with other humanities disciplines the goal of understanding ourselves and our world. Since religion is a powerful force in culture, it has been heavily involved in most of the world’s history, literature and art, and social institutions. The academic study of religion emphasizes the study of various religious traditions, their history, thought, social context, and moral and ritual expression.

A major in religion requires 14 courses within the department. Each student is assigned a departmental advisor who helps select courses. Students need to complete the sequence REL 205, 206, and 207 early in their program and take REL 497 near the end of their studies. In addition, a religion major requires one course from each of the following six areas: African American religion, American religion, Biblical studies, ethics or philosophy of religion, Eastern religions, and Western religions. Four elective courses, drawn from these areas or elsewhere in the department, complete the requirement of 14 courses. At least six courses must be at the 300 level or above.

Religion majors must also complete 28 hours of related courses selected from a wide range of disciplines related to their special interests. Students should consult with their departmental advisor in selecting these. Students will also be required to demonstrate or develop proficiency in a foreign language related to their area of specialization, or with departmental approval, fulfill a research methods requirement of 21 hours.

The department also provides a dual major (11 courses) and a minor (eight courses). See the department chair for complete details.

Graduates with a degree in religion choose employment in a wide variety of professions, including teaching, social services, counseling, law, ministry, and medicine. Technical training required for these fields usually follows the baccalaureate program, but students are encouraged to choose electives that support their career interests as soon as possible. Career planning information is available for religion majors.
Degree Requirements—Religion

Bachelor of Arts Degree

General Education Requirements  57

Departmental Requirements  48–53

Fourteen courses to be chosen from:
REL 205, 206, 207  9
REL 497  4

Six additional courses, one from each area:
- African American Religion
- American Religion
- Biblical Studies
- Ethics or Philosophy of Religion
- Eastern Religions
- Western Religions  23–24

Religion electives  12–16
At least 24 hours must be at the 300 level or above.

Foreign Language and Research Methods Requirement  24–32

Related Requirements  28
Approved courses related to area of specialization

Electives  22–35

Total (minimum requirement)  192

Religion Honors Program

The Department of Religion encourages superior academic work through an honors program. Honors students take advantage of special seminars and discussion sections, departmental reading courses, and other opportunities. Relatively small classes also make it possible to work more closely with professors. Juniors and seniors with a 3.0 cumulative GPA and a religion major or adequate background in religion may participate in the departmental honors program. Interested students should contact the chair of the department.

Minor in Religion

A minor in religion enhances the student's preparation for business, educational, and other professional fields. It also promotes a student's self-understanding and cultural awareness, and enriches any college education. To earn a minor in religion, students fulfill the following requirements:

Requirements
REL 205, 206, 207  9
Five additional courses in religion*  17–20

Total  26–29

*At least 12 hours must be at the 300 level or above.

Selected Studies

Director Sharon H. Nelson
Program Committee Coordinator Robert A. Wood

The program in selected studies allows students to pursue a self-designed course of study. It is planned for students with a definite educational objective that is not met by the majors presently offered by the College of Liberal Arts. While the program is free from several traditional requirements, students must meet other requirements and procedures to obtain the degree.

Students are eligible for the program after they complete 45 credit hours. With the help of program sponsors, students formulate a contract outlining their study goals and reserving at least 48 credit hours for core courses that help accomplish those goals. The contract is evaluated and approved by the Program Committee.

In addition to completing the core and meeting all other university and college requirements for graduation, students must successfully complete at least 60 credit hours in courses numbered 300 or above; eight to 16 credit hours must be earned in LA 490, Senior Project in Selected Studies. Students must submit a proposal for the project to the program committee for approval before the beginning of their senior year.

Students interested in selected studies should see the committee coordinator for more information about the program.

Degree Requirements—Selected Studies

Bachelor of Arts Degree

General Education Requirements  57

Core Courses  48

Senior Project (LA 490)  8–16

Foreign Language and Research Methods Requirement  24–32

Electives  39–55

Total (minimum requirement)  192

Ordinarily no more than 45 hours in one department may be counted toward the degree.
Dual Major Degree Requirements—Social and Industrial Communication

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 72

Required courses:

COM 101, 102, 141, 446, and three of the following: COM 441, 443, 445, 447;
SOC 303, 306, and two of the following: SOC 350, 440, 441 41

Major electives chosen from:

ATH 250; COM 333, 340, 343, 345, 346, 347, 401, 429, 448, 449, 451, 453, 455, 457, 489;
SOC 201, 340, 341, 345, 348, 380, 406, 433, 442, 444, 446, 450;
or other approved courses 31

Foreign Language and Research Methods Requirement 24–32

Electives 31–39

Total 192

Social Science Education

Director Sharon H. Nelson
Coordinator Robert W. Adams

Students who wish to teach social science in Ohio public high schools can pursue the B.A. in Social Science Education. Upon completion of this undergraduate degree program in the College of Liberal Arts, students then need to complete the Professional Educators Program (PEP) Master of Education degree (M.Ed.) through Wright State’s College of Education and Human Services. Graduates of the B.A. in Social Science Education and the Professional Educators Program are then eligible to seek licensure from the Ohio Department of Education in Integrated Social Studies.

Requirements for admission to the PEP program include a minimum GPA, admission testing, and interviews. Throughout their undergraduate work, students should consult regularly with their advisor in the College of Education and Human Services to ensure that they are meeting requirements to enter the PEP program.

Social and Industrial Communication

Program Coordinator Robert E. Pruett

The dual major in social and industrial communication is offered by the Department of Communication and the Department of Sociology and Anthropology. The dual major is designed for students interested in organizational communication and who want, in addition, an in-depth understanding of the sociological influences that operate in organizations.

A graduate of this program will gain insight into the organizational world: how communication is used in the workplace, the role of the individual in an organization, and how to cope with organizational change.
Degree Requirements—Social Science Education

Bachelor of Arts Degree

General Education Requirements 54
Required Substitutions: EC 201, 202, 203
Pre-Education Courses 15
ED 301, ED 303, EDS 333, ED 221, ED 223

Major Content Courses 95
HST 211, 212 6
American History (300/400-level) 8
European History (300/400-level) 4
Non-Western History (300/400-level) 8
History Electives (300/400-level) 8
GEO 201, 202, 203 9
PLS 212, 222 8
Political Science Electives (300/400-level) 16
SOC 201 3
Sociology Electives (300/400-level) 4
PSY 110, 351 8
EC 201, 202, 203 9
Cultural Diversity Course 4

Foreign Language and Research Methods Requirement 24–32
Electives 0–4

Total (minimum requirement) 192–196

Social Work

Professor Bognar

Associate Professors: Baker, Brum, Curry-Jackson (chair), Myadze

Assistant Professor: Rogers

The Bachelor of Arts program in social work prepares students for beginning employment in social work or for graduate study. Students considering social work as a career should be interested in people of widely varying ages, abilities, and backgrounds; they need to be disciplined, emotionally stable, and intellectually creative. Social workers typically find employment in family services, children’s services, public schools, hospitals, mental health centers, and probation and parole boards. While most social workers perform direct practice duties, others are employed as outreach workers, community organizers, and administrators in public, voluntary, and for-profit agencies. Newer fields are also opening up for social workers, such as services to older adults.

The baccalaureate program is fully accredited by the Council on Social Work Education.

Requirements for admission to the social work program include completion of SW 270 and 271 with a grade of “C” or higher, with an overall GPA of 2.25 or higher; related social science courses; human biology; and the writing portion of the Pre-Professional Skills Test or passing the writing intensive component of four General Education courses.

Applications are accepted two times per year: March 1 and November 1. Admissions to the social work major are selective. Not all persons meeting the minimum requirements can be accepted into the major. Students should see the department’s academic advisor if they have questions about the application criteria.

To graduate with a social work degree, a grade of “C” or higher is required in all social work courses including SW 491 or the following: accepted inferential statistics courses: STT 265, MS 202, or PLS 211.

Degree Requirements—Social Work

Bachelor of Arts Degree

General Education Requirements 57

Specific Courses:
Area Three—The Non-Western World:
   CST 240—Comparative Non-Western Cultures
Area Four—Understanding the Contemporary World:
   BIO 107

Departmental Requirements 56
SW 270, 271, 375, 380, 470, 481, 482, 483, 484, 490, 491; SW 487, 488, 489 (field practicum)

Related Requirements 7
COM 102
PSY 341

Foreign Language and Research Methods Requirement 24–32
Electives 40–48

Total (minimum requirement) 192
Social Work Honors Program

The Department of Social Work recognizes superior achievement by social work majors with an honors program that allows students to graduate with the designation of honors in social work. Students in the program have an opportunity to pursue original research and analysis that goes beyond the requirements of their course work.

Junior and senior students with a 3.0 overall GPA and a 3.5 average in social work may apply. Students must initiate and successfully complete an honors project. The department suggests that honors students take at least one UH 400 interdisciplinary seminar before starting their honors project.

Certificate in Gerontology

The certificate in gerontology program offers students academic preparation and practical experience in the growing field of gerontology:

- Knowledge about the consequences of the aging process (physical, social, and psychological) and the needs associated with the aging process throughout the life span
- Knowledge about current social and health policies, as well as programs developed to meet the increasing needs of older people
- Skills to work as a team member in an interdisciplinary setting designed to help older people
- Sensitivity about the values necessary to work with older people

Sociology and Anthropology

*Professors* Ballantine, Cargan (Emeritus), Cross (Emeritus), Islam (Emeritus), Melko (Emeritus), Riordan, Savells (Emeritus), Siegal, Welty (Emeritus)

*Associate Professors* Bellisari, Durr, Koebnick (Emeritus), Orenstein, Shepelak, Steinberg (WSU–Lake Campus)

*Assistant Professors* Bogumil, Bush, Molina, Steele, Wilcox

*Instructor* Bergdahl

Sociology

Sociology is concerned with social relations: how people relate to each other as individuals, in families, or in groups; how they communicate in business and governmental situations; and how their behavior is judged as socially acceptable, deviant, illegal, or immoral. The Bachelor of Arts program in sociology trains students to observe and measure these interactions, predict likely outcomes from certain situations, and determine how we can develop programs to change behavior for the good of individuals and society.

Sociology graduates typically find careers that involve dealing with people, often working for large businesses or organizations or in community service, public relations, teaching, or research.

Sociology majors are required to take five or more upper-level courses designed to develop their writing skills and thinking capacity.

Degree Requirements—Sociology

**Bachelor of Arts Degree**

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>57</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departmental Requirements</td>
<td>59</td>
</tr>
<tr>
<td>SOC 201, 204, 301, 303, 306, 406, 442</td>
<td>25</td>
</tr>
<tr>
<td>Any two of the following: SOC 320, 340, 345, 360, 380</td>
<td>8</td>
</tr>
<tr>
<td>300- to 400-level SOC electives (minimum)</td>
<td>20</td>
</tr>
<tr>
<td>Other SOC electives</td>
<td>6–15</td>
</tr>
<tr>
<td>Related Electives</td>
<td>12</td>
</tr>
<tr>
<td>Twelve hours in any single approved discipline at the 300–400 level.</td>
<td></td>
</tr>
<tr>
<td>Foreign Language and Research Methods Requirement</td>
<td>24–32</td>
</tr>
<tr>
<td>Electives</td>
<td>32–40</td>
</tr>
<tr>
<td>Total</td>
<td>192</td>
</tr>
</tbody>
</table>

Sociology Honors Program

The department encourages qualified students to conduct independent research through the department’s honors program. Students are eligible for the program if they have a GPA of 3.0 overall and 3.5 in sociology. Departmental honors are awarded at graduation. Under SOC 490, students must complete an honors project under the guidance of an honors advisor. Interested students should contact the departmental office for further information.
Minor in Sociology

The minor in sociology allows students to supplement their education in many fields. Students take SOC 306 (Sociological Methods) and five courses at the 300–400 level, four of them from one of the following concentrations: social organizations; deviance/criminology; social change; family/socialization. The minor requires a total of 28 credit hours.

Anthropology

Anthropology studies the behavior and biology of the human species, both current and past, often drawing on information from the social and biological sciences. The Bachelor of Arts program in anthropology focuses on three areas: cultural anthropology, archaeology, and physical anthropology.

Cultural anthropology exposes students to ways of life, belief systems, and value systems that differ from their own, examining the ways in which cultures deal with universal human problems, from the basic needs of food and shelter to the metaphysical questions of existence. Typical subjects for cultural anthropology include ecology and subsistence techniques, economics, political systems, religion, and cultural change.

Archaeology deals with cultures of the past. Archaeologists search for and study the material remains of past cultural activity and try to reconstruct the behavior patterns, technology, and social customs of people who no longer exist.

Physical anthropology focuses on the biological aspects of the human species. Physical anthropologists study the fossil evidence to determine how evolution has influenced human behavior and biology. Studies of biological variability in modern populations are also part of this discipline, since many physical differences among populations are the result of their having adapted to different environments.

Anthropology majors should normally complete the 200-level introductory courses before taking 300- or 400-level courses.

Degree Requirements—Anthropology

Bachelor of Arts Degree

General Education Requirements 57

Departmental Requirements 54

ATH 241, 242, 448 or 468 10

Cultural electives 12

Archaeology electives 12

Physical electives 8

Open electives 12

ATH 369, Field School in Archeology, may count for no more than six hours toward major requirements.

Related Requirements 24

Selected from economics, geography, history, political science, psychology, sociology, and certain courses from biological sciences, geological sciences, and communication.

Foreign Language and Research Methods Requirement 24–32

Electives 25–33

Total 192

Anthropology Honors Program

The department encourages qualified students to conduct independent research through the department's honors program. Students are eligible for the program if they have an overall GPA of 3.0 and an average of 3.5 in anthropology by the end of their junior year. Departmental honors are awarded at graduation. Under ATH 492, students are required to complete an honors project under the guidance of a faculty honors advisor. Interested students should contact the departmental office for further information.

Minor in Anthropology

The minor in anthropology provides a cluster of courses that form an introduction to the subfields of anthropology. It is intended for students in other majors who wish to supplement their study with the perspectives unique to anthropology.

The minor in anthropology contains 29 credit hours. This includes 12 hours in three introductory courses (ATH 250, 241, 242) which expose students to the subfields of cultural and physical anthropology and archaeology. Upper-level courses are structured to allow students to examine the content of each subfield in greater depth. The required course in theory can be taken in either archaeology (ATH 468) or cultural anthropology (ATH 448).

Requirements for the Anthropology Minor

CST 240, ATH 241, 242 9

One course from cultural anthropology 4

One course from archaeology 4

One course from physical anthropology 4

One theory course (ATH 448 or 468) 4

One course: Selective (any area) 4

Total 29

Students are expected to maintain a 2.0 overall GPA.
Theatre Arts

Professors Blair, David, Derry, Klein, Reichert

Associate Professors Benjamin, Crews, Cromer, Donahoe, Johnson, Knauer, Lavarnway, Laflerty, McDowell (chair), Rodriguez, Walker, White

Assistant Professors Deer, Hellem

The Department of Theatre Arts is devoted exclusively to the training and education of undergraduate students in the areas of dance, motion pictures, and theatre. These programs lead to the Bachelor of Arts and the Bachelor of Fine Arts degrees.

The Department of Theatre Arts is empowered by the Ohio Revised Code to require particular preliminary training or talent for admission to specific programs, and each of the five B.F.A. degree programs has specific criteria for admission to each level of training. Students in all areas must earn a minimum GPA of 2.0 by the end of the freshman year to continue in a theatre arts major. Students who wish to be admitted as majors in acting, dance, or directing/stage management must successfully pass an audition or interview. Transfer students are admitted into B.F.A. programs on the basis of a successful audition, interview, or portfolio presentation. The department has an open admissions policy for students wishing to major in the B.A. programs in theatre studies and motion picture history, theory, and criticism, and B.F.A. programs in design/technology and motion picture production.

All students who return after an absence of four or more consecutive quarters must reapply to the faculty for readmission to the program, and at the discretion of the faculty may be required to satisfy program requirements in effect at the time of readmission. Details of the admission and retention policy are detailed in the Department of Theatre Arts Student Handbook.

Dance

The program in dance is designed to train students for a career in performance, teaching, or choreography. This program combines theatrical and musical training that helps prepare dance students for either specialized careers in modern dance or in ballet companies, or for a career in the professional theatre as a dancer who sings and acts.

The foundation of the dance curriculum is a daily class in ballet technique with additional training in modern, jazz-theatre dance, and tap. Classes in choreography, dance pedagogy, and dance history are required. Seniors must complete an individually choreographed senior dance project. Required courses outside of dance include studies in theatre, acting, music theory, music literature, and singing.

All students must successfully audition for admission into the dance program. All transfer students are required to audition for acceptance and placement. To remain in the dance program, students must demonstrate continual growth as judged by the faculty, maintain a 2.5 GPA in all dance courses, and a 2.0 GPA overall. Dance faculty evaluate all majors at the end of each academic year; students must earn a positive recommendation before they can enroll for the next level of training.

Exceptional dance majors are selected to study and to perform as members of Dayton Ballet II or Dayton Contemporary II. These dancers are eligible for scholarships from the Department of Theatre Arts.

Dance majors are required to audition for the Wright State Dance Ensemble. Other auditions may be required by the dance faculty for other performances, including lecture-demonstrations, choreographic presentations, dance tours, and dramatic and musical productions. Dance majors must maintain a minimum GPA of 2.0 to be eligible for graduation.

Degree Requirements—Dance

Bachelor of Fine Arts Degree

General Education Requirements

| TH 214 | 57 |

Departmental Requirements

| DAN 101, 102, 103, 111, 112, 113, 201, 202, 203, 211, 212, 213, 251, 252, 253, 301, 302, 303, 311, 312, 313, 321, 322, 323, 341, 342, 343, 371, 372, 373, 399 (six hours), 401, 402, 403, 411, 412, 413, 421, 422, 423, 491, 492, 493 | 102 |

Related Requirements

| TH 147, 148, 149, TH 105, TH 100 (five hours), MUS 114, 117, 118, 214 | 24 |

Electives

| 9 |

Total

| 192 |

Motion Pictures

The program in motion pictures provides a study of film as an art. The curriculum offers two options: the Bachelor of Fine Arts degree in theatre with a concentration in motion picture production; and the Bachelor of Arts degree in theatre with a concentration in motion pictures history, theory, and criticism.
The B.F.A. Program

The B.F.A. program follows an open admission policy only for the first quarter; thereafter, students must progress according to department guidelines in order to continue. Prospective motion picture B.F.A. students must take TH 131 the fall quarter of their freshman year and receive an "A" or "B" in order to proceed to any other classes as a major. Students successful in TH 131 should register for TH 231 in the winter quarter. In order to be eligible to take TH 180 and TH 232 in the spring quarter, students must have completed 24 university credit hours, received a "C" or higher in TH 231, and achieved an overall GPA of 2.25 by the end of winter quarter.

After completion of the spring quarter, prospective B.F.A. students must submit a Sophomore Audition Application and be officially accepted as a film major in order to continue into the sophomore year. Note that there will be a limited number of students invited to enroll into the second year and become B.F.A. majors. Further details regarding evaluation standards can be found in the Theatre Arts at Wright State Booklet, published by the department.

At the end of the sophomore year, B.F.A. students must audition successfully for entrance into the junior and senior years of the program. This process is called the Junior Audition and is a comprehensive process involving multiple meetings with faculty and review of all work done in the program. Before students are accepted into the junior year, they must have a 2.5 GPA in all film history/theory courses and a 2.25 overall GPA. Students must also have completed six film history/theory courses, not including TH 131, and including TH 232 and 233, and have earned at least 85 credit hours. Students are required to submit original media work for faculty evaluation. To be accepted to the third year, students must show promise of benefiting from continuing education. In their third year, all production students are expected to demonstrate growth in film technique and earn additional credits in film history, theory, and criticism, as well as credits in General Education classes and electives.

The B.A. Program

Students who are interested in the B.A. program generally follow the same program of study for the first year as the B.F.A. students. Like B.F.A. students, B.A. students are required to take TH 281 and TH 282. At the end of the freshman year, B.A. students should indicate to the faculty their intention to return to the program. If places are available, they will be allowed into TH 281 and TH 282 the fall and winter quarter of their sophomore year. More likely, B.A. students will be guaranteed entry into TH 281 and TH 282, but not until their junior or senior year.

A B.A. degree in motion pictures can be thought of as a general liberal arts degree preparing one for entrance into professions requiring knowledge of contemporary culture. More specifically, the B.A. degree can prepare one for graduate study in film and subsequent employment as a professional writer or teacher in a university; other job options include working for a film archive, festival, library, museum, arts council, or publisher.

Motion Picture Honors Program

The honors program in motion pictures provides students of superior academic ability with the opportunity to broaden and demonstrate their skills. To earn a degree with honors, students must complete the departmental major requirements, maintain a superior GPA throughout their course of studies, and successfully complete a senior honors project, TH 499, sometime in their senior year. To be admitted to the honors program, students must have a cumulative GPA of 3.5 in their major and an overall GPA of 3.25. Both B.A. and B.F.A. students should contact the coordinator of the motion pictures area or the department chair for further details.

Degree Requirements—Motion Picture History, Theory, and Criticism

Bachelor of Arts Degree

The Bachelor of Arts degree combines a liberal arts education with an appreciation of the aesthetic, social, and historical aspects of the film medium. Because film is a highly eclectic medium of expression, the department has designed a coordinated program of electives for the B.A. student.

General Education Requirements 57

Required Substitutions:
ART 214 or TH 214 for art requirements

Departmental Requirements 61

MP 131, 180, 231, 232, 233, 334 19
Additional courses in motion picture history, theory, and criticism to be chosen from:
MP 331, 332, 333, 435 33
Additional production courses to be chosen from: MP 281, 282, 283, 381, 382, 383, 436, 499 9

Related Requirements 11

ART 207
MUS 214 or 121
One of the following:
EDT 455; COM 152, 253, 256, 360, 365 or appropriate substitute (consult advisor for alternates)
Degree Requirements—Motion Picture Production

Bachelor of Fine Arts Degree
The Bachelor of Fine Arts degree is designed to give students preprofessional training for vocations closely related to film and video production, while simultaneously giving them an opportunity to develop their creativity.

General Education Requirements
57

Required Substitutions:
ART 214 or TH 214 for art requirements

Departmental Requirements
72

MP 131, 180, 222, 231, 232, 233, 281, 282, 283, 334, 381, 382, 383, 436, 481

Additional courses in motion picture history, theory, and criticism to be chosen from:
MP 331, 332, 333, 435
21

Related Requirements
24-26

ART 207, 258, 358 or 359
MUS 114: 121 or 214
Two of the following:
EDT 455; COM 152, 253, 256, 360, 365 or appropriate substitute (consult advisor for alternatives)
Electives
37-39

Note: There is no limit on the number of electives which may be theatre courses.

Total
192

Degree Requirements—Acting and Acting—Musical Theatre

Bachelor of Fine Arts Degree
The professional acting and acting/musical theatre programs are an intensive, four-year progression of studies in acting, voice, movement, dance, and singing. Acting majors may choose an emphasis in musical theatre. Because courses in the acting program follow a set sequence, students are generally admitted only in the fall quarter. The Professional Actor Training program is limited by audition only to selected, superior students who show promise of high achievement in acting and/or musical theatre. Retention in the Professional Actor Training program is determined by periodic review. Students are retained in the program based on their growth and development as judged by the acting faculty. All students in the program must earn a grade of "C" or better in an acting sequence to continue in the program. A 2.0 overall GPA is required for continued good standing.

Acting

General Education Requirements
57

Required option:
TH 214

Departmental Requirements
106


Related Requirements
16

TH 102, 120, 122
DAN 111, 112, 113
Electives
13

Total
192

Theatre

Students who wish to study theatre choose from professional programs leading to the Bachelor of Fine Arts degree, or from the Bachelor of Arts degree in theatre studies. The professional programs are acting, acting-musical theatre, and design/technology/stage management. Admission for the acting program is by audition. The department has an open admissions policy for first-term freshmen in the design/technology/stage management and theatre studies programs. Transfer students must audition or interview for all B.F.A. programs. Each B.F.A. program has set criteria for selectively retaining students in the programs. These include a requirement that students must earn a GPA of at least 2.0 to continue in the B.F.A. programs; most of the programs require a higher minimum GPA for graduation. The policies are spelled out in the following sections and in the Theatre Arts Student Handbook, which is issued annually. Students are required to consult quarterly with an academic advisor.
Acting/Musical Theatre

General Education Requirements  57

Required option:

<table>
<thead>
<tr>
<th>Departmental Requirements</th>
<th>93</th>
</tr>
</thead>
<tbody>
<tr>
<td>TH 106, 107, 108, 144, 145, 146, 157, 158, 159, 240,</td>
<td></td>
</tr>
<tr>
<td>244, 245, 246, 254, 255, 256, 257, 258, 259, 337, 338,</td>
<td></td>
</tr>
<tr>
<td>339, 344, 354, 355, 357, 358, 359, 371, 372, 373, 438,</td>
<td></td>
</tr>
<tr>
<td>444, 454, 457, 458, 459, plus six credits of 360, 361,</td>
<td></td>
</tr>
<tr>
<td>366, 367, or 368 of choice</td>
<td></td>
</tr>
</tbody>
</table>

Related Requirements  31

<table>
<thead>
<tr>
<th>TH 102, 120, 122</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAN 104, 105, 106, 121, 304, 305, 306, 207, or 307,</td>
</tr>
<tr>
<td>208 or 308, 209 or 309, 331, 332, 333 plus six credits</td>
</tr>
<tr>
<td>from 300 or 400 dance of choice</td>
</tr>
</tbody>
</table>

Electives  11

| Total | 192 |

Degree Requirements—Design/Technology/Stage Management

Bachelor of Fine Arts Degree

The program in design/technology prepares students for careers as designers, technicians, and stage managers in the professional theatre. During the junior year, students begin a concentration in either design or technology in the fields of costumes, scenery, lighting, sound, or properties. Students interested in concentrating in stage management do so beginning in the freshman year. All design/technology majors must present their portfolio for an evaluation at the end of each year of study. Students are retained in the program and accepted into the sophomore year of study based on (1) their maintaining an overall GPA of 2.0, and (2) their continual growth as determined by the faculty and by a successful portfolio evaluation at the end of each year of study. Before students can begin their junior or senior year, they must have a 2.5 GPA on all design and technology classes and a 2.25 overall GPA. Students must also continue to show steady growth in their craft. Student must demonstrate leadership skills and self-discipline and show promise of benefiting from continued training. Any student whose overall GPA falls below 2.25 will be suspended from production, graphics, and design classes, and from using facilities until the GPA is raised. The faculty reserves the right to totally suspend from a program any student who does not fulfill these continuing requirements. Students may be reinstated if the requirements are subsequently fulfilled. Students not performing in their academic or production assignments will be dropped from the program.

General Education Requirements  57

Required option:

<table>
<thead>
<tr>
<th>Departmental Core Requirements</th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td>TH 102, 124, 125, 147, 210 (18 hours), 220,</td>
<td></td>
</tr>
<tr>
<td>224, 227, 229, 301, 360, 361, 366, 367, 368</td>
<td></td>
</tr>
</tbody>
</table>

One of the following concentrations:

Technology Concentration (80 hours)

| TH 124, 125, 126, 225, 226, 228, 320; MP 131 (18 hours), 328, 329, 362, 420 (18 hours), | |
| 429 (six hours); and six hours chosen from TH 324, 326, and ART 206 |

Design Concentration (80 hours)

| TH 124, 125, 126, 225, 226, 228, 320; MP 131 (18 hours), 328, 329, 324, 325, 326, 362, 424, | |
| 425, 426, 429, and ART 206 |

Stage Management Concentration (48-54 hours)*

| TH 148, 149, 324, either 325 or 326, 350, 351, 410 (nine-15 hours), 429; COM 102; CS 205; | |
| DAN 111; ENG 330; HPR 260; MUS 114 |

Electives  0-32

| Total | 192 |

* Recommended electives for students in the Stage Management Concentration are TH 131, 498 (12-15 hours), and COM 453.

Degree Requirements—Theatre Studies

Bachelor of Arts Degree

Theatre majors working toward the Bachelor of Arts degree combine the advantages of a liberal arts education with preparation for a career in theatre or theatre-related areas. The department encourages students to maintain a balance between theory and practice, and among the various arts of the theatre, gaining insight and perspective by studying art, history, literature, music, philosophy, religion, and science.

Because of the strength of the theatre production program, the B.A. theatre studies student is in a particularly advantageous position to acquire a high level of practical as well as theoretical knowledge, a distinction not afforded theatre students in programs with lesser production emphases. The student is encouraged to diversify in a variety of disciplines; courses throughout the department as well as production opportunities are open to these students.

The major in theatre studies is generally considered to be preparation for further study at the graduate level.
Urban Affairs and Geography

Professors: Mazey, Oshiro, Pammer
Associate Professor: Dustin (chair)
Assistant Professors: Killian, Subban, Wenning
Lecturer: Lowrey

Urban Affairs

Urban Affairs is an interdisciplinary program offering a Bachelor of Arts or Bachelor of Science. Students learn about the urban environment as a complex system. They study theories and practices of urban development processes from an interdisciplinary perspective. Urban affairs develops student core competencies that include quantitative and qualitative analysis, effective communications, systems thinking, and consensus building and teamwork. The program is designed to prepare students for junior- or entry-level positions in local government and nonprofit organizations or to embark on a graduate program.

Students must have at least a 2.3 GPA or receive a special waiver from the chair to be admitted to the major. Interested students may apply for admission after meeting college admission requirements and completing the General Education Area IV social science requirement (PLS 200, SOC 200, EC 200, PSY 105). Majors are required to complete a common core of courses and a specialization in one of four areas: community development, criminal justice, urban management and administration, or urban social and physical planning.

Urban affairs majors may participate in the department’s internship program. The internship is designed to complement urban affairs students’ class work and gives them experience in the actual work environment. Students interested in the internship should contact the departmental coordinator of the program or their advisor.

For further information about the program and admission criteria and procedures, students should contact the Department of Urban Affairs and Geography.

Degree Requirements—Urban Affairs

Bachelor of Arts Degree

General Education Requirements

Departmental Requirements

Foundation Courses: choose five

URS 311, 411, 492

GEO 340; SOC 444

Urban Affairs Specialization (see specializations below)

ENG 330 or 333

Electives

Total

Degree Requirements—Urban Affairs

Bachelor of Science Degree

General Education Requirements

Required Substitution: MTH 228

Departmental Requirements

Foundation Courses: choose five

URS 311, 411, 492

GEO 340; SOC 444

(See specializations below and advisor before enrolling in these or other approved foundation courses.)
Urban Affairs Specialization 32–35
ENG 330 or 333 4
Science Requirements 22–26
MTH 128 or 129, and 228, plus two statistics and two computer science courses to be approved by the department
Electives 41–48
Total 192

Criminal Justice Concentration—32 Credit Hours
This concentration meets the needs of students preparing for careers in crime prevention and law enforcement. Knowledge of law, the urban environment, psychology, and social relations provides a foundation for work in the criminal justice system. Employment may be found in various judicial, administrative, and police agencies at all levels of government and in private companies. In addition to required courses, students select elective courses that fit their unique career objectives. Prior to enrollment, students should discuss with their advisor which courses best fit their needs.

Recommended foundation courses include:
URS 321, 345, 425, 450; and SOC 444.

Required concentration courses include:
URS 420 and PLS 436, plus 24 credit hours of department approved courses.

Community Development Concentration—32 Credit Hours
Community development involves revitalizing, sustaining, and expanding urban areas. Such work requires an understanding of many of the principles found in planning, organizing, managing, policy-making, finance, economics, and physical development. The community development course series prepares students for careers as community developers in public, not-for-profit, or grassroots organizations. Students should select courses that fit their unique career objectives, such as economic development, neighborhood development, and social development. Prior to enrollment, students should discuss with their advisor which courses best fit their needs.

Recommended foundation courses include:
URS 317, 321, 425, 450; and GEO 340.

Required concentration courses include:
URS 415, 416, and 24 credit hours of department approved courses.

Urban Management Administration—32 Credit Hours
This area is suggested for students who wish to develop careers in management and administration in public agencies, including municipal, county, and state governments and not-for-profit organizations. It includes courses in management, personnel and labor relations, budgeting, and public administration. Prior to enrollment, students should discuss with their advisor which courses best fit their needs.

Recommended foundation courses include:
URS 321, 345, 425, 450, and 470 or 475.

Required concentration courses include:
URS 346, 446, and 24 credit hours of department approved courses.

Urban Physical and Social Planning—35 Credit Hours
Urban physical planning prepares students for involvement in functions and processes such as infrastructure design, zoning, land use, code enforcement, and pollution abatement. Urban social planning involves students in careers associated with health, recreation, welfare, and social wellness. Municipalities, counties, public authorities, not-for-profit organizations, and engineering and architectural firms employ physical and social planners. Prior to enrollment, students should discuss with their advisor which courses best fit their needs.

Recommended foundation courses include:
URS 317, 321, 424, 450; and GEO 340.

Required concentration courses include:
URS 318; GEO 365, 447, 448; and 16 credit hours in department approved courses.

Urban Affairs Honors Program
The Urban Affairs Honors Program provides an opportunity for students to achieve their highest possible level of intellectual attainment. Urban affairs majors of superior academic ability are invited to apply. A student may enter either upon successful application or at the invitation of the Urban Affairs Honors Committee. To be eligible, the student must have a cumulative GPA of 3.5 or better in all course work completed at Wright State University. It is recommended that students apply to enter the program during their junior year and no later than the first quarter of their senior year.

Honors students are required to complete all urban affairs degree requirements, maintain a cumulative GPA of 3.5 in all course work, complete URS 411 (senior seminar) with a grade of “A”, defend orally the seminar paper to a committee composed of the URS Honors Committee and the faculty advisor for the seminar paper, and complete at least one University Honors Seminar.
Minor in Urban Affairs

The minor in urban affairs will benefit students who pursue careers that have connections to urban administration, planning, criminal justice, or community development and non-profit organizations. Students minoring in urban affairs study and analyze cities and urban regions as systems. They will gain an understanding of complex social, political, and economic forces shaping urban life. Interdisciplinary urban affairs courses may be useful to majors in the social sciences, economics, business, education, and health care.

Acceptance into the minor in urban affairs requires an overall 2.3 GPA. Students who do not have a 2.3 GPA may petition the chair of the department for a waiver from this requirement. Students should complete the social science General Education requirements prior to enrolling in minor classes. Students must maintain a minimum GPA of 2.0 in the minor.

Requirements

<table>
<thead>
<tr>
<th>Requirements</th>
<th>28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses</td>
<td>16</td>
</tr>
<tr>
<td>URS 311, 317, 321*, and 345*</td>
<td></td>
</tr>
<tr>
<td>Elective Courses</td>
<td>12</td>
</tr>
<tr>
<td>Select three courses: URS 412, 415, 423, 424, 425, 450, 470 or 475</td>
<td></td>
</tr>
</tbody>
</table>

* Political Science students who take URS 321 and URS 345 for their major must substitute URS 450 and 470 for the Urban Affairs minor.

Geography

Geography is the study of the location and interrelationships of human and physical phenomena on the earth's surface. Because of its emphasis on spatial organization and distribution of these phenomena, geography has a broad cross-disciplinary base. Topics of study such as cartography, climatology, landform analysis, remote sensing, settlement theory, spatial interaction, and urban morphology indicate the breadth of contemporary geography. The undergraduate major in geography includes the study of cultural, economic, physical, and regional geography, as well as cartography, quantitative methods, and field work. Backgrounds in the natural and social sciences, humanities, statistical methods, and computer programming are useful to the geography major.

The geography program allows students to select a curriculum best suited to their particular interests. Geography majors select a program leading to either a Bachelor of Arts degree or Bachelor of Science degree.

The Bachelor of Arts degree in geography focuses on examining the processes of formation and the characteristics of the cultural landscape. Students select an area of study from physical geography, resource analysis and land management, or economic geography.

The Bachelor of Science program in geography emphasizes technical skills and logic. Courses in physical, economic, and social geography, and in cartography, photogrammetry, remote sensing, and geographic information systems are emphasized in the program. These courses are complemented by courses in mathematics, philosophy, and computer science.

Geography may be selected as an academic major, a secondary teaching major in social science or earth science program, or as part of an elementary teaching major. Students majoring in geography may qualify for licensure at the secondary level by meeting the minimum requirements in professional education courses for licensure by the state of Ohio. Students are strongly urged to consult with an advisor before registering because of sequential requirements and prerequisites.

Geography majors may participate in the department's internship program. The internship is designed to complement geography students' class work and gives them experience in the actual work environment. Students interested in the internship should contact the departmental coordinator of the program or their advisor.

Certificate Program

The Department of Geography provides a certificate program in cartography, photogrammetry, and remote sensing. Included is a group of five courses exposing participants to the latest developments in data collection and analysis techniques, aerial and space cameras and sensors, photographic materials and reproduction processes, and mapping procedures, including computer mapping. Upon completing these courses, each participant must present a portfolio of materials for faculty review and complete an oral review of his or her work with the faculty.

Students interested in the certificate program should contact the department chair.

Degree Requirements—Geography

Bachelor of Arts Degree

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>57</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departmental Core Requirements</td>
<td>26</td>
</tr>
<tr>
<td>GEO 201, 202, 203</td>
<td>9</td>
</tr>
<tr>
<td>GEO 365, 385</td>
<td>10</td>
</tr>
</tbody>
</table>
GEO 486 Foundations of Geography  3
One course in regional geography  4

Departmental Major Requirements  32–33
GEO 322, 361, 430  12
GEO 340, 353, 375  12
Additional appropriate geography courses numbered 300 or above to suit particular interests or future plans of the student  8–9

Related Course Requirements  24
Approved courses numbered 200 and above (not to exceed four courses in one department) in biological sciences, computer science, economics, engineering, geological sciences, history, mathematics, philosophy, physics, and political science and urban affairs

Language and Research Methods Requirement  24–32

Electives  21–29
Should be selected in consultation with the departmental advisor to complement and support the student's area of interest

Total  192

Degree Requirements—Geography

Bachelor of Science Degree

General Education Requirements  57

Departmental Core Requirements  26
GEO 201, 202, 203  9
GEO 365, 385  10
GEO 486  3
One course in regional geography  4

Departmental Major Requirements  36–37

Physical Component
Three of the following:
GEO 322, 331, 430, 432  12

Economic-Social Component
Three of the following:
GEO 302, 340, 353, 375, 455  12

Skills Component
Three of the following:
GEO 361, 362, 445, 446, 447, 463  12–13

Related Course Requirements  28–29

Mathematics and Statistics
SIT 264, 265  13

Philosophy
Two of the following:
PHL 215, 471, 472  8

Computer Science
Two of the following:
CS 141, 142, 205, 300  7–8

Electives  43–44
Should be selected in consultation with the departmental advisor to complement and support the area of concentration

Total  192

Geography Honors Program

The geography honors program allows superior students to work on a geographic problem of their own choosing. Applicants must be majors in geography, have senior standing with 36 hours of geography courses to their credit, and meet certain minimum GPAs. Candidates are required to complete an honors project under the direction of a geography faculty member. Successful completion of the project, including written and oral project reports, entitles students to graduate with honors in geography. Geography honors students are encouraged to participate in the University Honors Program; interested students should contact the departmental coordinator of the program.

Minor in Geography

The minor in geography is designed for students in other disciplines who wish to supplement their knowledge and skills with geographic analytical skills and perspectives. A minimum GPA of 2.5 is required in the minor.

The course requirements for a minor in geography are:
GEO 331, 430  8
GEO 340, 353  8
GEO 361, 365  9
GEO 385  5
GEO 481/492  2
Women’s Studies

Program Director: Marlene Durr
Affiliated Faculty: See program Web site at http://www.cola.wright.edu/prog/wms

Women’s Studies (WMS) is an interdisciplinary program that places women in all their diversity at the center of inquiry and examines how gender influences our personal identities, cultural and artistic expressions, social arrangements, political and economic systems, and even our ways of knowing and understanding the world. The Bachelor of Arts program in women’s studies is organized around three major areas of inquiry: feminist thought, women in multicultural perspective, and women in international perspective. Through courses taught in these and other areas across many disciplines, as well as opportunities for internship experiences and/or independent research, students will gain 1.) critical thinking and communication skills; 2.) the ability to analyze multiple fields of difference related to gender, race, cultural identity, nationality, class, age, sexual orientation, and physical ability; 3.) new ways of seeing and new standards for evaluating diverse women’s and men’s contributions to knowledge and society; 4.) a more inclusive and transformative understanding of themselves and the world(s) in which they live; and 5.) the opportunity to actively participate in social change.

The breadth and flexibility of the major enables students to choose among a variety of courses in many disciplines that suit their needs and interests as well as to tailor their course of study to develop a specialization within women’s studies. Because the women’s studies major is made up of courses that also count toward minors and majors in other disciplines, it also offers students the opportunity to pursue minors or dual majors in other fields to supplement and apply their training in women’s studies with fewer additional credits to complete. As documented in national studies of women’s studies graduates, a major in women’s studies prepares students for a broad array of graduate and professional programs and a broad range of careers in such areas as research, writing, teaching, public policy, social and health services, law, business, and communications in public, private, and nonprofit organizations at local, national, and international levels.

Students seeking admission to the major must possess an overall GPA of 2.0. To graduate with a degree in women’s studies, students must complete, along with university and college requirements, 20 hours of core courses and 31–36 hours of additional requirements, and maintain a grade of “C” or higher in all approved WMS courses taken for the major, 40 hours of which must be at the 300-level or above.

Major in Women’s Studies

General Education Requirements 57

Foreign Language and Research Methods Requirements 24–32

Major Requirements 51–56

Core Requirements (5 courses, 20 credits)
Approaches to Women’s Studies (WMS 200) 4
Women in Multicultural Perspective (WMS 300) 4
(variable topics based on disciplinary cross-listings)
Women in International Perspective (WMS 400) 4
(variable topics based on disciplinary cross-listings)
Feminist Thought (WMS 450) 4
Independent Field Experience (WMS 498) or Independent Study (WMS 499) 4

Additional Requirements (9 courses, 31–36 credits)
1 additional WMS approved feminist thought/ theory course in any discipline 4
1 additional WMS approved women in multicultural perspective course in any discipline 3–4
1 additional WMS approved women in international perspective course in any discipline 3–4
6 additional WMS approved courses in any discipline 21–24

Note: Within the additional requirements, at least one course each in history, literature, and two different social sciences approved for Women’s Studies must be completed. A list of approved women’s studies courses which count toward the core and additional requirements is available through the Women’s Studies Web site at www.cola.wright.edu/prog/wms.

Free Electives 47–60

Total 192

Minor in Women’s Studies

The women’s studies minor is open to students from all majors and consists of a total of seven to eight courses. All students take a single, required core course, WMS 200. In addition, students select six to seven approved women’s studies courses.
Global Gender Studies Track in the International Studies Major

The global gender studies track in the international studies majors enables students to study women and gender issues from an international and cross-cultural perspective. Through courses on women and gender in relation to international diplomacy and peace studies, area studies, comparative cultures, and international economic affairs, students can develop special expertise for work in such areas as women in economic development, human rights, and cross-cultural relations in the contexts of intergovernmental and nongovernmental organizations. See the international studies program description as well as the directors of international studies and women's studies for more information.

Other Options in Women's Studies

Students may alternatively or additionally pursue a women's studies graduate certificate independent of a graduate degree, alongside any graduate degree program or in the context of the women's studies emphasis in the Master of Humanities program or the women's studies option in the M.A. in English program. For more information on graduate work in women's studies, see the graduate catalog and the Women's Studies Website.
NURSING AND HEALTH
Admissions and Advising

The baccalaureate program in nursing is an upper division major. Admission to Wright State University does not guarantee admission to the Wright State University-Miami Valley College of Nursing and Health.

To be eligible to apply for admission to the college, students must be accepted as degree-seeking students at Wright State University, complete all designated prerequisite courses with a combined 2.5 GPA, and have at least a 2.5 cumulative GPA. Due to the number of applicants seeking admission to the College of Nursing and Health, admission will be competitive based upon cumulative GPA. The number of students admitted is determined by the availability of such resources as clinical sites and by the number of faculty available to the college. All students must submit an admissions application to the college office by the established deadline.

Students must earn a grade of "C" or better in all science courses to progress through the clinical nursing courses. Students must also earn a grade of "C" or better in each nursing course.

All students must fulfill current health requirements, including immunizations, and certify they are in good health and able to actively participate in clinical experience and fulfill all program objectives. To confirm this, students must undergo a physical examination and submit medical insurance, and CPR documentation to the College of Nursing and Health before they enter NUR 217. Students must continue to meet these requirements each year thereafter. Faculty may request a student's reexamination if evident limitations interfere with the student's clinical practice or learning.

Students must provide their own transportation to all clinical agencies.

New Students

All new students interested in nursing will be admitted to the university as prenursing students. Most new students will initially be advised in the University College. Students may seek admission to the College of Nursing and Health to complete their program after they:

1. complete 48 quarter credit hours;
2. maintain a cumulative GPA of 2.5 or higher;
3. complete all prerequisite courses with a minimum GPA of 2.5;
4. earn at least a grade of "C" in ENG 101 and 102, PSY 105 and 110, CHM 102, SOC 200, ANT 201, HST 101, STT 100, and M&L 220;
5. submit a College of Nursing and Health admissions application by the established deadline; and
6. submit a written statement of 250 words or less describing life experiences the applicant brings to nursing.
Transfer Students

Transfer students must meet the same requirements as new students. Transfer students who do not have the necessary prerequisites will be admitted as prenursing students and advised in the University College until they meet the requirements listed for new students, including a GPA of 2.5 or above. Transfer students with 75 or more credits and at least a 2.5 GPA will be advised in the College of Nursing and Health.

Transfer students with baccalaureate nursing credits from another accredited nursing program will have their nursing credits evaluated in the College of Nursing and Health.

Registered Nurses

The College of Nursing and Health offers a Bachelor of Science in Nursing completion track for registered nurses. This course of study builds on the skills and experiences of the registered nurse and provides a solid preparation for future graduate study. All registered nurses are granted advanced standing for their prior learning.

Registered nurse students may choose to complete the program on-line or in a traditional classroom setting. The classroom based program is available at the Dayton campus, Lake Campus, and at Southern State Community College in Hillsboro, OH.

Student Organizations

The Wright State Student Nurse Association (WSSNA) is a branch of the national and state student nurse associations and is open to all nursing and prenursing majors.

Zeta Phi Chapter of Sigma Theta Tau International Honor Society of Nursing is affiliated with the College of Nursing and Health. Membership is offered to the top one-third of baccalaureate students who have completed at least three-fourths of the nursing curriculum.

Student Mentoring and Retention Team (SMART) is a student managed/faculty supported retention program for all prenursing and nursing students.

Degree Requirements

Bachelor of Science in Nursing Degree

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>59.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Substitutions</td>
<td></td>
</tr>
<tr>
<td>Natural Science:</td>
<td></td>
</tr>
<tr>
<td>CHM 102</td>
<td></td>
</tr>
<tr>
<td>ANT 201, 202</td>
<td></td>
</tr>
<tr>
<td>Behavioral Sciences:</td>
<td></td>
</tr>
<tr>
<td>PSY 105</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>STT 160</td>
<td></td>
</tr>
<tr>
<td>Support Courses</td>
<td>32</td>
</tr>
<tr>
<td>M&amp;I 220</td>
<td></td>
</tr>
<tr>
<td>P&amp;B 301, 302</td>
<td></td>
</tr>
<tr>
<td>PSY 110, 311, and 341</td>
<td></td>
</tr>
<tr>
<td>BMB 250</td>
<td></td>
</tr>
<tr>
<td>PHR 3-50</td>
<td></td>
</tr>
<tr>
<td>Nursing Requirements</td>
<td>89</td>
</tr>
<tr>
<td>Free Electives</td>
<td>11.5</td>
</tr>
<tr>
<td>Total</td>
<td>192</td>
</tr>
</tbody>
</table>

There is also a plan of study for students who choose to complete the program in three calendar years plus fall quarter. Students who change from one plan to the other will be admitted to the alternate plan on a space-available basis only.

The College of Nursing and Health faculty reserves the right to revise the nursing requirements or the sequence at any time as deemed necessary to prepare students for new and emerging roles in nursing. Course requirements or sequence scheduling may also be changed.

Students can repeat a science course once time only: a maximum of two science courses may be repeated. Students may repeat one nursing course. Students subsequently failing any nursing course will be dismissed from the program.

Honors Program

Students with superior academic ability may participate in the nursing honors program, which emphasizes independence, self-direction, and in-depth study in an area of interest to the student. To be eligible, students must have a 3.2 or higher GPA for the 45 credit hours immediately preceding the winter quarter of their junior year. Students eligible to participate in the nursing honors program will be notified by the college's Office of Student Affairs.
RAJ SOIN COLLEGE OF BUSINESS
Admissions and Advising

All students who are interested in a degree in business administration should apply to Wright State University’s Office of Undergraduate Admissions. When applying, students should indicate their preferred major within the college, if known. Business majors are required to complete the program of study that is in effect at the time of their admission to the Raj Soin College of Business. Specific requirements for admission to the college follow; these requirements are subject to change.

Admission from University College and Other WSU Colleges

The college has a two-tier admission process. Students in University College or another unit of Wright State must meet the following Tier 1 requirements to transfer to the Raj Soin College of Business:

Tier I
1. 45 hours earned.
2. Completion of ENG 101 and 102, and either MTH 128 or 129 (or higher-level math class), all with a letter grade of "C" or better.
3. 2.5 minimum cumulative GPA.

Students who meet the above requirements will be assigned to a prebusiness category and will be required to meet the following Tier II requirements before they can enroll in junior- or senior-level classes.

Tier II
Completion of:
- ACC 201, 202
- EC 201, 202, 203
- MS 201, 202
- CS 205
- MTH 228

Transfer Students

Transfer students seeking admission to the Raj Soin College of Business must satisfy the criteria for Wright State students.

Students who return to Wright State University after being absent for four or more quarters must reapply for admission and satisfy the same admission requirements listed above for Wright State students. These students will be required to complete the program requirements that are in effect at the time of their readmission to the college.

Acceptable transfer credit will satisfy any of the above requirements.

Enrollment in 300- or 400-level business classes is restricted to business majors who have completed Tier II and attained junior standing. This is to ensure that students have the appropriate prerequisites and an adequate foundation for their professional coursework in business.

In the quarter that they register for their last Tier II requirements, students will be automatically transferred from a prebusiness to a business major number permitting enrollment in 300-level business
in business. The fourth is comprised of business and nonbusiness electives. Business electives must be chosen from courses that are offered by the Raj Soin College of Business but are not already required by the student's major. Nonbusiness electives are nonbusiness courses similar to the General Education requirements. Certain restrictions do apply and are noted on the major check sheets. The exact number of electives required will depend on a student's major in business.

Students wishing to pursue a double major within the Raj Soin College of Business must formally declare their intention to do so. To earn a double major, students must complete all minimum requirements for both programs of study.

Graduation Requirements

In order to graduate, all students must:

1. Complete 189 credit hours of acceptable academic work.
2. Attain a 2.0 or better GPA.
3. Complete all course requirements as specified by the student's program of study.
4. Complete the last 45 hours of course work at Wright State.
5. Complete at least 50 percent of required business courses at Wright State.
6. Complete a minimum of 30 credit hours of upper division course work at Wright State.
7. (For accounting and management majors) maintain a 2.0 or better cumulative GPA in major courses.

Seniors should meet with their academic advisor before their last quarter to be sure they have completed all requirements for graduation.

Business Minors

A minor program provides students with a structured concentration of study that will be noted on students' transcripts. The following minors are offered by the Raj Soin College of Business. The Business Minor is open to nonbusiness majors who have been admitted to a major program of study. This minor is recommended for nonbusiness majors who may wish to pursue a Master of Business Administration. Forty-eight hours are required:

- CS 205; EC 201, 202, 203; ACC 201, 202; MS 201, 202; MGT 302; MKT 301, 302; FIN 301, 302; LAW 350; and MIS 300.

Economics is open to business and nonbusiness majors who have been admitted to a major program of study. Twenty-four hours are required: EC 201, 202, 203, and five economics electives.

Management is open to business and nonbusiness majors who have been admitted to a major program of study. Students will be admitted when
they have attained junior standing and have been admitted to a major program of study. Twenty-four hours are required: MGT 302, 321, 485; LAW 350, 420; and three electives.

Management Information Systems is open only to business majors. Students will be admitted after attaining junior status and completing Tier II requirements. Twenty-one hours are required: MIS 321, 322, 410, 420, and three electives.

Operations Management is open to business and nonbusiness majors. Students will be admitted when they have attained junior standing and been admitted to a major program of study. Twenty-four hours are required: MS 203, 306, 331, 435, 437, 438, 439, and one elective.

Marketing is open to business and nonbusiness majors. Students will be admitted when they have attained junior standing and have been admitted to a major program of study. Twenty-five hours are required: MKT 301, 302, 303, 366, 446, and three electives.

Nonbusiness majors may complete only one minor and may not take additional business courses beyond those required for their minor. Liberal Arts Economics majors and Organizational Leadership majors may not complete any business minor.

Additional information and application forms for business minors are available in 110 Rike.

Honors Program

The Raj Soin College of Business sponsors an honors program for all students who have demonstrated outstanding academic ability and superior accomplishments to complete a program in the college that will encourage and recognize their distinguished efforts and abilities. Such students may earn an honors degree by completing the departmental major requirements, by maintaining a high academic record, and by successfully completing the college honors program. Students who are interested in applying to the program may contact the college’s advising office for eligibility requirements and further details.

Cooperative Education

The Cooperative Education Program at Wright State University gives students a chance to integrate classroom theory with practical, career-related work experience. Business students may alternate full-time quarters of on-campus study with quarters of full-time educationally related jobs, or may choose to combine a part-time co-op work schedule with a reduced, but full-time, course load.

Through the co-op program, students can gain valuable learning experiences, test career interests, learn more about business career fields, and develop job-related skills, as well as earn income for college expenses. Details on program requirements and procedures are available in the Office of Career Services, E334 Student Union.

Student Organizations

Each of the majors offered by the Raj Soin College of Business sponsors a student club. Participation in these clubs gives students an opportunity to gain valuable career information and develop closer ties with the faculty and other students in their major. Club activities include business meetings, speakers from business and industry, tours of local businesses, career fairs, and social events.

The current clubs are the Accounting Club, Association of Information Technology Professionals, Economics Club, Finance Club, International Business Club, Operations Management Club, Management Club, and Marketing Club. Several of these clubs are affiliated with professional societies. Membership in these clubs is open to all students. Students may contact the appropriate department office or stop in 110 Rike Hall for information on how to join.

The Association of Black Business Students was organized to strengthen the relations between black students and the entire campus and business community. The association accomplishes this by promoting academic excellence, professional and personal development, and cultural awareness. Membership is open to all Wright State University students.

Honor Societies

A chapter of Beta Gamma Sigma, the national scholastic honor society in business and administration, was established at Wright State in 1976. In 1984, the Alpha Delta Chapter of Omicron Delta Epsilon, an international honor society for economics scholars and students, was chartered at Wright State. In addition, there is a chapter of Alpha Iota Delta, the national honor society for operations management majors; Beta Alpha Psi, the national honorary accountancy fraternity; and Sigma Iota Epsilon, the national honorary management fraternity.
Departments/ Major Programs

There are 10 major programs available to students in the Raj Soin College of Business. For those students who wish to major in business, but who do not know which major they are interested in, there is an undecided category. To ensure timely graduation, students are encouraged to select a major before the junior year. However, students may remain undecided until the middle of their junior year; by that time they will have had course work in all the major areas in business and will be in a better position to decide on a major. Advisors are available to help students with this decision. Students who intend to major in accounting, management information systems, or operations management should declare their major before their junior year, because the major requirements follow a specific sequence. Generally, it is possible to change majors within business during the junior year without delaying graduation.

The course requirements of the freshmen and sophomore year are the same for all majors except management information systems and operations management and are listed below. Please note that accounting, finance, and management information systems majors are required to complete ACC 203.

Required Courses—Majors in Business

An official list of major requirements will be mailed at the time the student is admitted to the college. Since this list represents a contract between the college and students, it is important that students meet with an advisor to review the requirements and sign the program of study form.

The program requirements listed on the following pages illustrate a recommended schedule for full-time students. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure they observe prerequisite requirements of the courses.

General Education Requirements

Required Substitutions:

MTH 228
EC 201, 202, 203

Freshman Year

First Quarter  14–16

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
<tr>
<td>Science 1*</td>
<td>4</td>
</tr>
<tr>
<td>MTH 128 or 129</td>
<td>3–5</td>
</tr>
<tr>
<td>HST 101</td>
<td>3</td>
</tr>
<tr>
<td>MTH 228</td>
<td>4</td>
</tr>
<tr>
<td>HST 102</td>
<td>3</td>
</tr>
</tbody>
</table>

Second Quarter  16

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 102</td>
<td>4</td>
</tr>
<tr>
<td>Science II*</td>
<td>4</td>
</tr>
<tr>
<td>MTH 228</td>
<td>5</td>
</tr>
<tr>
<td>HST 102</td>
<td>3</td>
</tr>
</tbody>
</table>

Third Quarter  17

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Arts*</td>
<td>3</td>
</tr>
<tr>
<td>Science III*</td>
<td>4</td>
</tr>
<tr>
<td>CRT/CSE*</td>
<td>3</td>
</tr>
<tr>
<td>HST 103</td>
<td>3</td>
</tr>
</tbody>
</table>

Sophomore Year

Fourth Quarter  16

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 201</td>
<td>3</td>
</tr>
<tr>
<td>PSY 105</td>
<td>4</td>
</tr>
<tr>
<td>EC 201</td>
<td>3</td>
</tr>
<tr>
<td>RST/RSE*</td>
<td>3</td>
</tr>
<tr>
<td>MS 201</td>
<td>3</td>
</tr>
</tbody>
</table>

Fifth Quarter  16

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 202</td>
<td>3</td>
</tr>
<tr>
<td>ENG 330</td>
<td>4</td>
</tr>
<tr>
<td>EC 202</td>
<td>3</td>
</tr>
<tr>
<td>SOC 200</td>
<td>3</td>
</tr>
<tr>
<td>MS 202</td>
<td>3</td>
</tr>
</tbody>
</table>

Sixth Quarter  15

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonbusiness elective*</td>
<td>3</td>
</tr>
<tr>
<td>PLS 200</td>
<td>3</td>
</tr>
<tr>
<td>EC 203</td>
<td>3</td>
</tr>
<tr>
<td>Great Books</td>
<td>3</td>
</tr>
<tr>
<td>MS 203</td>
<td>3</td>
</tr>
</tbody>
</table>

* Students have a choice of courses that meet General Education requirements in the following areas: Great Books, fine and performing arts, comparative studies, regional studies, and natural sciences. The chapter on General Education requirements, on pages 50–54, lists the specific courses that meet the requirements in these areas.

† Accountancy, finance, and management information systems majors are required to complete ACC 203.

Accountancy

Professor Sprohge, Talbott
Associate Professor Brackney (chair), Hereth, Lightle
Assistant Professors Bukovsky, Hartwell, Lin, Kremer (WSU–Lake Campus)

Lecturers Houston
Instructor Terzian

The objective of the accountancy major is to educate students for professional careers in public, industrial, governmental, and not-for-profit accounting. To this end, the program provides a broad educational experience for students and gives them a background for completing professional accounting examinations such as the CIA (Certified Internal Auditor) and CMA (Certified Management Accountant). Accountancy majors may consider a minor in either management information systems or computing and information technology. Students interested in financial management are encouraged to complete a series of accountancy and finance
courses designed to prepare them for the CFM (Certified Financial Manager) exam. Accountancy majors would need to complete ACC 412, FIN 420 and 421. This major also provides an excellent undergraduate background for a degree in law.

Students who plan to take the CPA (Certified Public Accountant exam) should pursue the Master of Accountancy Program upon completion of the bachelor program in order to meet the education requirements of the Accountancy Board of Ohio.

Transfer students who major in accountancy should note that at least 18 credit hours of their accountancy courses must be taken at Wright State.

The department has a chapter of Beta Alpha Psi, the national accountancy honorary fraternity.

Degree Requirements — Accountancy

Bachelor of Science in Business Degree

The program in accountancy requires a minimum of 189 credit hours.

The following program represents a recommended schedule for full-time students pursuing a four-year program. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure that they meet prerequisite requirements. Planning schedules are available in the department office.

Junior Year

**Seventh Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 301</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MKT 301</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MIS 300</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Eighth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 302</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MKT 302</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MGT 302</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Ninth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 303</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LAW 350</td>
<td>3</td>
<td>Nonbusiness Elective 3</td>
</tr>
<tr>
<td>ACC 306</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Senior Year**

**Tenth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 499</td>
<td>3</td>
<td>ACC 421 3</td>
</tr>
<tr>
<td>EC 320</td>
<td>3</td>
<td>ACC 407 3</td>
</tr>
<tr>
<td>Nonbusiness Elective</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Eleventh Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS 306</td>
<td>3</td>
<td>ACC 441 3</td>
</tr>
<tr>
<td>LAW 360 or 370</td>
<td>3</td>
<td>Nonbusiness Elective 4</td>
</tr>
<tr>
<td>MGT 491</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Twelfth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 492</td>
<td>3</td>
<td>ACC 498 3</td>
</tr>
<tr>
<td>Business elective</td>
<td>3</td>
<td>ACC 442 3</td>
</tr>
</tbody>
</table>

Economics

**Professors** Blair, Fichtenbaum, Kumar, Premus, Renas, Sav, Swaney

**Associate Professors** Dung, Hopkins, Olson, Osborne, Traynor (chair)

**Lecturer** Endres

The field of economics covers a broad range of concerns, from practical questions about how a business can improve efficiency, to the more abstract study of the limits that nature imposes on human populations and natural resources. Economics aims at improving our welfare by understanding how people make decisions when faced with relative scarcity and by studying the complex relationships among the production, consumption, and distribution of material goods.

The economics program equips students to pursue careers in business and government, or prepares them for graduate study in economics, business, or law. Our graduates have achieved success as executives in a wide variety of industries and are employed as professional economists in such diverse areas as urban economics, workforce and training analysis, business forecasting, school finance consulting, evaluating health and delivery systems, budget analysis, market consulting, government planning, banking, and statistical analysis. Some of our graduates continue their education in our master's program in social and applied economics.

The program outlined here is designed to give our students both the background that will broaden their future options and the specific skills necessary to apply economic ideas. This includes the ability to express economic ideas clearly, concisely, and grammatically.

Departmental faculty advisors are available to all students who need advice about formulating and reaching career goals, as well as making decisions about elective courses.

Degree Requirements — Business Economics

Bachelor of Science in Business Degree

The program in economics requires a minimum of 189 credit hours. A minimum of 36 credit hours in economics is required.
The following program represents a recommended schedule for full-time students pursuing a four-year program. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure that they meet prerequisite requirements.

### Junior Year

#### Seventh Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 315</td>
<td>MIS 300</td>
<td>4</td>
</tr>
<tr>
<td>FIN 301</td>
<td>Nonbusiness Elective</td>
<td>3</td>
</tr>
<tr>
<td>MKT 301</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

#### Eighth Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 317</td>
<td>MKT 302</td>
<td>4</td>
</tr>
<tr>
<td>FIN 302</td>
<td>EC 301</td>
<td>3</td>
</tr>
<tr>
<td>MGT 302</td>
<td>MGT 300</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Ninth Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 319</td>
<td>LAW 350</td>
<td>4</td>
</tr>
<tr>
<td>EC 409</td>
<td>Nonbusiness Elective</td>
<td>3</td>
</tr>
<tr>
<td>EC Electives*</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### Senior Year

#### Tenth Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 320</td>
<td>MGT 490</td>
<td>3</td>
</tr>
<tr>
<td>Nonbusiness Elective</td>
<td>EC Electives*</td>
<td>6</td>
</tr>
</tbody>
</table>

#### Eleventh Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC Electives*</td>
<td>MGT 491</td>
<td>6</td>
</tr>
<tr>
<td>MS 306</td>
<td>Business Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Twelfth Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC Electives*</td>
<td>Nonbusiness Electives</td>
<td>6</td>
</tr>
<tr>
<td>MGT 492</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

*Economics electives include any 300- or 400-level EC classes that are not required.

---

### Economics Minor

See Business Minors, page 149.

---

### Finance and Financial Services

**Professors** Aminia, Bacon (chair), Gressis, Sweeney

**Associate Professors** Ahmad, Larsen, Williams (associate dean)

**Assistant Professor** Akhbari

**Instructor** Block

Two majors are available: finance and financial services.

The finance major includes a core of courses that cover all aspects of the theory and practice of financial management. Financial management involves managing the financial affairs of businesses and other organizations. The curriculum includes courses in accounting, investments, working capital management, international finance, and managerial finance. A special sequence of courses has been designated for students interested in obtaining the CFP (Certified in Financial Management) designation. Among the many job opportunities open to the finance major are capital budgeting analyst, cash manager, credit analyst, financial analyst, loan officer, and financial manager.

The financial services major is designed to meet the growing need for people who are knowledgeable in all areas of personal financial management, including investments, insurance, tax planning, retirement planning, real estate, estate planning, and personal financial planning. Among the many career opportunities available to the financial services major are financial planner, stockbroker, insurance agent, real estate broker, loan officer, and trust officer. Students who complete the financial services major at Wright State are eligible to sit for the Certified Financial Planner Exam.

Students with an interest in both finance and accounting may wish to consider a dual major in finance and accounting. Interested students should contact an academic advisor.

---

### Degree Requirements—Finance

**Bachelor of Science in Business Degree**

The major in finance requires a minimum of 189 credit hours.

The following program represents a recommended schedule for full-time students pursuing a four-year program with a major in finance. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However,
they must complete all requirements and plan their schedule to ensure that they meet prerequisite requirements.

### Junior Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seventh Quarter</td>
<td>FIN 301</td>
<td>Business Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LAW 350</td>
<td>Business Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MKT 301</td>
<td>Business Elective</td>
<td>3</td>
</tr>
<tr>
<td>Eighth Quarter</td>
<td>FIN 302</td>
<td>ACC 305</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 302</td>
<td>EC 320</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 302</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Ninth Quarter</td>
<td>FIN 303</td>
<td>ACC 306</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MS 306</td>
<td>Nonbusiness Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

### Senior Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenth Quarter</td>
<td>Business Elective</td>
<td>FIN 401</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Finance Elective</td>
<td>FIN 490</td>
<td>3</td>
</tr>
<tr>
<td>Eleventh Quarter</td>
<td>FIN 420</td>
<td>Nonbusiness Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 491</td>
<td>Finance Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Business Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Twelfth Quarter</td>
<td>Finance Electives</td>
<td>FIN 421</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 492</td>
<td>Business Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

* A list of approved finance electives is available from an advisor.

### Degree Requirements—Financial Services

**Bachelor of Science in Business Degree**

The major in financial services requires a minimum of 189 credit hours.

The following represents a recommended schedule for full-time students pursuing a four-year program in financial services. Many individuals, especially part-time students, will be unable to follow the program as shown. These students should contact their advisors to plan their schedules.

### Junior Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seventh Quarter</td>
<td>FIN 301</td>
<td>MKT 301</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>FIN 331</td>
<td>Nonbusiness Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>FIN 305</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### Eighth Quarter

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 302</td>
<td>MGT 302</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>FIN 331</td>
<td>EC 320</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MGT 302</td>
<td>MGT 300</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

### Ninth Quarter

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS 306</td>
<td>MIS 300</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>ACC 441</td>
<td>Nonbusiness Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LAW 350</td>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

### Senior Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenth Quarter</td>
<td>MGT 490</td>
<td>Finance Services Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>FIN 461</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 366</td>
<td>Elective*</td>
<td>3</td>
</tr>
<tr>
<td>Eleventh Quarter</td>
<td>MGT 491</td>
<td>Financial Services Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>FIN 462</td>
<td>Business Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nonbusiness Electives</td>
<td>5</td>
</tr>
<tr>
<td>Twelfth Quarter</td>
<td>FIN 463</td>
<td>Financial Services Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MGT 492</td>
<td>Elective*</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

* A list of approved financial services electives is available from an advisor.

### Insurance

See Finance and Financial Services.

### International Business

This major prepares students for careers in international business. The program has an applied learning orientation that includes foreign language courses and an internship in an area of international business. The degree is interdisciplinary, combining courses in culture, foreign language, and international business. A combination of international courses is taken in each functional area of business, including marketing, accountancy, finance, management, and economics.

The international business major should be selected by students who want a broad background and applied experiences for administrative careers that require competency in language, culture, and international business operations. In addition, the major provides a firm grounding in the management of organizational and institutional resources and in international issues.
Through the required internship, the major provides the opportunity to apply skills learned in the classroom to real life situations. The major also encourages study abroad opportunities to hone foreign language skills and international trade competencies.

Applied modern language courses are offered in Spanish, French, and German through the Department of Modern Languages.

The objective of the major is to enhance the awareness, understanding, and expertise of business students in a coordinated, interdisciplinary structure that ensures a unique academic opportunity. This is accomplished through:

- providing expertise in the international trade operations of international business;
- providing understanding of the interdependencies among business, culture, and language competencies for global economic effectiveness;
- developing decision making skills in planning, organizing, leading, and controlling resources in international business; and
- developing sustained and structured awareness of the international dimensions of all business functions.

Language Placement

Students with fewer than two years of a foreign language in high school or a grade of "C" or lower are advised to enroll in FR, GER, or SPN 101, 102, 103 for credit.

Students who have studied a foreign language for two or more years and received a grade of "B" or better may not take 100-level foreign language courses for credit; they must enroll in FR, GER, or SPN 201.

Students with three or four years of high school foreign language may place themselves in FR, GER, or SPN 311 or 321.

Degree Requirements—International Business

Bachelor of Science in Business Degree

The major in international business requires a minimum of 189 credit hours.

The following program represents a recommended schedule for full-time students pursuing a four-year program with a major in international business. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure that they meet prerequisite requirements.

This schedule assumes that a student may go directly into second-year foreign language courses.

**Freshman Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Code</th>
<th>Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>ENG 101</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science 1*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fine Arts *</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Second Quarter</td>
<td>ENG 102</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science II*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Third Quarter</td>
<td>Great Books*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science III*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CST/CSE*</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Code</th>
<th>Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>ACC 201</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC 201</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS 201</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Second Quarter</td>
<td>ACC 202</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC 202</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS 202</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Third Quarter</td>
<td>SOC 200</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC 203</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS 203</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Junior Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Code</th>
<th>Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>MGT 301</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FIN 301</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MGT 300</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Second Quarter</td>
<td>MGT 302</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FIN 302</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS 300</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Third Quarter</td>
<td>MS 306</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LAW 350</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS 340</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Senior Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Course Code</th>
<th>Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>MGT 490</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC 435</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Raj Soin College of Business 155
Management

**Professors** Hartmann, Owen (chair), Scherer (associate dean for Community Relations), Petrick, Stickney (emeritus)

**Associate Professors** Baker, Davy, Slonaker, Wendt, Williams

**Assistant Professor** Cordano

**Instructor** Ritzler

Management is a universal process that applies to all career fields and to private, public, and nonprofit organizations. The curriculum offers two majors: the management major and the human resource management major.

The management major should be selected by students who want a broad background that prepares them for administrative careers in a wide range of settings. Course work is appropriate for individuals considering entry-level positions or management trainee programs. In addition, this major provides a firm grounding in the management of organizational, institutional resources, and internal issues.

The human resource management major is intended for students who have chosen a career in human resource management. The field is recognized for its increasingly significant contribution to the success of all types of organizations. Graduates will typically qualify for entry-level positions in recruiting, testing, interviewing, compensation, benefits, training, affirmative action, and labor relations. Also, graduates will be prepared to take the Professional in Human Resources Certification Test.

---

**Degree Requirements—Management**

**Bachelor of Science in Business Degree**

The program in management requires a minimum of 189 credit hours. The following program represents a recommended schedule for full-time students pursuing a four-year program. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure that they meet prerequisite requirements.

**Junior Year**

**Seventh Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 301</td>
<td>3</td>
</tr>
<tr>
<td>MGT 302</td>
<td>3</td>
</tr>
<tr>
<td>MKT 301</td>
<td>3</td>
</tr>
</tbody>
</table>

**Eighth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 302</td>
<td>3</td>
</tr>
<tr>
<td>MGT 300</td>
<td>1</td>
</tr>
<tr>
<td>MKT 321</td>
<td>3</td>
</tr>
</tbody>
</table>

**Ninth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 412</td>
<td>3</td>
</tr>
<tr>
<td>EC 320</td>
<td>3</td>
</tr>
<tr>
<td>LAW 420</td>
<td>3</td>
</tr>
</tbody>
</table>

**Senior Year**

**Tenth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS 435</td>
<td>3</td>
</tr>
<tr>
<td>MGT 490</td>
<td>3</td>
</tr>
<tr>
<td>Major Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Eleventh Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 491</td>
<td>3</td>
</tr>
<tr>
<td>MGT 410</td>
<td>3</td>
</tr>
</tbody>
</table>

**Twelfth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 492</td>
<td>3</td>
</tr>
<tr>
<td>MGT 485</td>
<td>3</td>
</tr>
</tbody>
</table>

* Major electives: LAW 370—Legal Aspects of Commercial Transactions, MGT 481—Internship, MGT 480—Special Topics, MGT 475—Small Business Management, MGT 473—Conflict Resolution, MGT 474—Quality Culture. Major courses must be completed with a "C" or higher average.
Degree Requirements—
Human Resource Management

Bachelor of Science in Business Degree

The program in human resource management requires a minimum of 189 credit hours.

The following program represents a recommended schedule for full-time students pursuing a four-year program. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure that they meet prerequisite requirements.

Junior Year

Seventh Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 301</td>
<td>3</td>
</tr>
<tr>
<td>MKT 301</td>
<td>3</td>
</tr>
<tr>
<td>MS 306</td>
<td>3</td>
</tr>
</tbody>
</table>

Eighth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 302</td>
<td>3</td>
</tr>
<tr>
<td>MKT 302</td>
<td>4</td>
</tr>
<tr>
<td>MGT 300</td>
<td>1</td>
</tr>
</tbody>
</table>

Ninth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 320</td>
<td>3</td>
</tr>
<tr>
<td>MGT 412</td>
<td>3</td>
</tr>
<tr>
<td>LAW 420</td>
<td>3</td>
</tr>
</tbody>
</table>

Senior Year

Tenth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 422</td>
<td>3</td>
</tr>
<tr>
<td>MGT 424</td>
<td>3</td>
</tr>
<tr>
<td>LAW 360</td>
<td>3</td>
</tr>
<tr>
<td>MGT 490</td>
<td>3</td>
</tr>
</tbody>
</table>

Eleventh Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 491</td>
<td>3</td>
</tr>
<tr>
<td>MGT 495</td>
<td>3</td>
</tr>
<tr>
<td>Business Elective</td>
<td>3</td>
</tr>
<tr>
<td>Nonbusiness Elective</td>
<td>4</td>
</tr>
</tbody>
</table>

Twelfth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 410</td>
<td>3</td>
</tr>
<tr>
<td>MGT 492</td>
<td>3</td>
</tr>
<tr>
<td>Nonbusiness Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Human Resource Concentration Electives

Students are required to complete four courses for one concentration:

Benefits Administration

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 305</td>
<td>FIN 452</td>
</tr>
<tr>
<td>FIN 351</td>
<td>FIN 461</td>
</tr>
<tr>
<td>MGT 481</td>
<td>MGT 480*</td>
</tr>
</tbody>
</table>

Training and Development

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 451</td>
<td>PSY 307</td>
</tr>
<tr>
<td>MGT 474</td>
<td>MGT 480*</td>
</tr>
</tbody>
</table>

Employee Relations

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 343</td>
<td>MIS 473</td>
</tr>
<tr>
<td>EC 445</td>
<td>MGT 481</td>
</tr>
<tr>
<td>MGT 480*</td>
<td>EC 552</td>
</tr>
</tbody>
</table>

Major courses must be completed with a "C" or higher average.

* MGT 480—Topics vary; only those approved by the department will apply.

Management Minor

See Business Minors, page 148.

Management Information Systems and Operations Management

Professors Sanders, Xu, Yen

Associate Professors Coleman, Polak

Assistant Professors Choi, Denison (chair), Graman, Wang, Watson, Weinstein

Lecturers Chesen, Lumpkin

Two majors are available: management information systems and operations management.

The management information systems major trains students for careers in information analysis, business systems design, and information systems management. The program strongly emphasizes business and organizational studies as well as information systems technology. Students in this program will study business systems analysis, business systems design, and computer programming. Other technical and business areas in the program focus on developing, implementing, and maintaining information systems in a variety of organizational settings. The program includes course work in information systems design and development methodologies, database structures, database management systems, computer programming, and data communications. The program also covers business fundamentals in accounting, finance, marketing, management, and management science.
## Degree Requirements—Management Information Systems

### Bachelor of Science in Business Degree

The program in management information systems requires a minimum of 189 credit hours.

The following program represents a recommended schedule for full-time students pursuing a four-year program. Many individuals, especially part-time students, may not be able to schedule their classes as shown. However, they must complete all requirements and plan their schedule to ensure that they meet prerequisite requirements.

### Freshman Year

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>17–19</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
<tr>
<td>Science 1‡</td>
<td>4</td>
</tr>
<tr>
<td>Fine Arts‡</td>
<td>3</td>
</tr>
<tr>
<td>MTH 128 or 129</td>
<td>3–5</td>
</tr>
<tr>
<td>HST 101</td>
<td>3</td>
</tr>
<tr>
<td>Third Quarter</td>
<td></td>
</tr>
<tr>
<td>ENG 102</td>
<td>4</td>
</tr>
<tr>
<td>Science 2‡</td>
<td>4</td>
</tr>
<tr>
<td>MTH 228</td>
<td>5</td>
</tr>
<tr>
<td>Science III‡</td>
<td>4</td>
</tr>
<tr>
<td>HST 103</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sophomore Year

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 201</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts‡</td>
<td>3</td>
</tr>
<tr>
<td>CS 208</td>
<td>4</td>
</tr>
<tr>
<td>ACC 201</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Junior Year

<table>
<thead>
<tr>
<th>Seventh Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS 321</td>
<td>3</td>
</tr>
<tr>
<td>MGT 300</td>
<td>3</td>
</tr>
<tr>
<td>ACC 300*</td>
<td>3</td>
</tr>
<tr>
<td>MIS 210</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Eighth Quarter

<table>
<thead>
<tr>
<th>Eighth Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 301</td>
<td>3</td>
</tr>
<tr>
<td>MGT 302</td>
<td>3</td>
</tr>
<tr>
<td>MKT 302</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Senior Year

<table>
<thead>
<tr>
<th>Tenth Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 490</td>
<td>3</td>
</tr>
<tr>
<td>MIS Elective</td>
<td>3</td>
</tr>
<tr>
<td>CST/CSE†</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eleventh Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 491</td>
<td>3</td>
</tr>
<tr>
<td>MIS 410</td>
<td>3</td>
</tr>
<tr>
<td>EC 320</td>
<td>3</td>
</tr>
<tr>
<td>MGT 492</td>
<td>3</td>
</tr>
<tr>
<td>MGT 306</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Twelfth Quarter</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 490</td>
<td>3</td>
</tr>
<tr>
<td>MIS 490</td>
<td>3</td>
</tr>
<tr>
<td>Nonbusiness Elective</td>
<td>6</td>
</tr>
<tr>
<td>MIS Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

* Management Information Systems/Accounting majors will be required to take ACC 321.
† Students have a choice of courses that meet General Education requirements in the following areas: Fine and performing arts, great books, comparative studies, regional studies, and natural sciences. The chapter on General Education requirements, on pages 50–55, lists the specific courses that meet the requirements in these areas.

### MIS Electives (select 2)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CEG 210</td>
<td>CS 302</td>
</tr>
<tr>
<td>CEG 211</td>
<td>MIS 340</td>
</tr>
<tr>
<td>CS 214</td>
<td>MIS 430</td>
</tr>
<tr>
<td>CS 225</td>
<td>MIS 440</td>
</tr>
<tr>
<td>CS 300</td>
<td>MIS 477</td>
</tr>
<tr>
<td>CS 301</td>
<td>MIS 480</td>
</tr>
</tbody>
</table>

(These courses are added as technology changes. Request an updated list in 110 Rike Hall prior to completing courses.)

### MIS Minor

See Business Minors, page 149.

## Operations Management

Operations management is the discipline that plans and coordinates the production and delivery of products and services to customers all over the world. Operations professionals manage and coordinate activities in this global pipeline to ensure an effective and efficient flow of materials and information from the time a need arises until it is satisfied and beyond. Some of the many activities involved include customer service, transportation, purchasing, manufacturing, plant management, warehousing, materials handling, strategic planning, inventory control, and forecasting. The goal of these activities is to satisfy the need to the ultimate consumer.
Effective operations management is critical to the success of every organization. Once considered an important, behind-the-scenes activity, operations management is now recognized as a strategic tool for creating customer value and loyalty. Companies like Wal-Mart, Coca-Cola, and Nike attribute a great deal of their success to the efficient management of their global supply chains.

Operations management majors study the strategies, concepts, management tools, and analytical techniques that enable organizations to be competitive in the world economy. Broadly speaking, the curriculum has three major areas:

1. The study of basic problem solving and data analysis tools to assist the operations manager in making good decisions.
2. The study of the major strategies, tools, and concepts for managing people, materials, and production resources to deliver value to the customer.
3. The integration of the operations function into corporate strategy.

Degree Requirements—Operations Management

Bachelor of Science in Business Degree

Freshman Year

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>14–16</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
<tr>
<td>Science I*</td>
<td>4</td>
</tr>
<tr>
<td>MTH 128 or 129</td>
<td>3–5</td>
</tr>
<tr>
<td>HST 101</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 102</td>
<td>4</td>
</tr>
<tr>
<td>Science II*</td>
<td>4</td>
</tr>
<tr>
<td>HST 102</td>
<td>3</td>
</tr>
<tr>
<td>CS 205</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science III*</td>
<td>4</td>
</tr>
<tr>
<td>HST 103</td>
<td>3</td>
</tr>
<tr>
<td>CS 206</td>
<td>4</td>
</tr>
<tr>
<td>MTH 228</td>
<td>5</td>
</tr>
</tbody>
</table>

Sophomore Year

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 201</td>
<td>3</td>
</tr>
<tr>
<td>MS 201</td>
<td>3</td>
</tr>
<tr>
<td>SOC 200</td>
<td>3</td>
</tr>
<tr>
<td>ACC 201</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts**</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 202</td>
<td>3</td>
</tr>
<tr>
<td>RST/RSE*</td>
<td>3</td>
</tr>
<tr>
<td>PSY 105</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sixth Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC 203</td>
<td>3</td>
</tr>
<tr>
<td>Great Books*</td>
<td>3</td>
</tr>
<tr>
<td>ENG 330</td>
<td>4</td>
</tr>
<tr>
<td>PLS 200</td>
<td>3</td>
</tr>
<tr>
<td>MS 203</td>
<td>3</td>
</tr>
</tbody>
</table>

Junior Year

<table>
<thead>
<tr>
<th>Seventh Quarter</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 300</td>
<td>1</td>
</tr>
<tr>
<td>MS 331</td>
<td>3</td>
</tr>
<tr>
<td>MIS 300</td>
<td>4</td>
</tr>
<tr>
<td>EC 320</td>
<td>3</td>
</tr>
<tr>
<td>MS 306</td>
<td>3</td>
</tr>
<tr>
<td>Nonbusiness Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eighth Quarter</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 301</td>
<td>3</td>
</tr>
<tr>
<td>MGT 300</td>
<td>1</td>
</tr>
<tr>
<td>ACC 300</td>
<td>3</td>
</tr>
<tr>
<td>MS 437</td>
<td>3</td>
</tr>
<tr>
<td>MGT 300</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ninth Quarter</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 302</td>
<td>3</td>
</tr>
<tr>
<td>MS 430</td>
<td>3</td>
</tr>
<tr>
<td>LAW 350</td>
<td>3</td>
</tr>
<tr>
<td>MGT 302</td>
<td>4</td>
</tr>
<tr>
<td>MS 433</td>
<td>4</td>
</tr>
<tr>
<td>Nonbusiness Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 411</td>
<td>3</td>
</tr>
<tr>
<td>MGT 490</td>
<td>3</td>
</tr>
<tr>
<td>MGT 431</td>
<td>3</td>
</tr>
<tr>
<td>MS 438</td>
<td>3</td>
</tr>
<tr>
<td>CST/CSE*</td>
<td>3</td>
</tr>
<tr>
<td>Business Elective</td>
<td>3</td>
</tr>
<tr>
<td>Nonbusiness Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eleventh Quarter</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 491</td>
<td>3</td>
</tr>
<tr>
<td>Nonbusiness Electives</td>
<td>6</td>
</tr>
<tr>
<td>MS 435</td>
<td>3</td>
</tr>
<tr>
<td>MS 438</td>
<td>3</td>
</tr>
<tr>
<td>Business Elective</td>
<td>3</td>
</tr>
<tr>
<td>Nonbusiness Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Twelfth Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 492</td>
<td>3</td>
</tr>
<tr>
<td>MS 490</td>
<td>3</td>
</tr>
<tr>
<td>Business Electives</td>
<td>6</td>
</tr>
<tr>
<td>Nonbusiness Elective</td>
<td>4</td>
</tr>
</tbody>
</table>

* Students have a choice of courses that meet General Education requirements in the following areas: Great books, fine and performing arts, comparative studies, regional studies, and natural sciences. The chapter on General Education requirements on pages 50–54 lists the specific courses that meet the requirements in these areas.

Operations Management Minor

See Business Minors, page 149.

Marketing

Professors: Khera, Saunders, Wise (Emeritus)
Associate Professors: Dovel (chair), Gulas, Ping
Assistant Professor: Cronley
Instructor: Wick

The Marketing Program gives students a thorough grounding in the concepts and techniques needed to make marketing decisions in any organization. In addition to survey courses in principles of marketing and marketing management, marketing majors study consumer behavior, promotional marketing, product management, price management, services marketing, international marketing, marketing research, and marketing planning.
Marketing careers are far reaching as they touch on all components of the marketing mix—product, promotion, pricing, and channels of distribution. In turn, each of these areas offers dozens of specific job opportunities. For example, the promotional area includes careers in advertising, public relations, personal selling, and merchandising. Moreover, a single area, such as advertising, can offer more than two dozen special career orientations. There are rewarding career opportunities in virtually all fields of endeavor.

Other major employment tracks include retailing, marketing research, product management, personal selling, and strategic planning. Faculty advisors will discuss specific marketing career plans with students.

For advice about specific academic programs, see an academic advisor in the dean's office.

Degree Requirements—Marketing

Bachelor of Science in Business Degree

The Marketing Program requires a minimum of 189 credit hours.

The following program represents the optimum junior- and senior-year schedule for full-time students pursuing a four-year program. See the section on required courses for business majors on page 151 for the freshman- and sophomore-year schedule. Many individuals, especially part-time students, will be unable to follow the program as shown. These students should contact their academic advisors to plan their schedules.

Junior Year

<table>
<thead>
<tr>
<th>Seven Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 301</td>
<td>3</td>
</tr>
<tr>
<td>MGT 302</td>
<td>3</td>
</tr>
<tr>
<td>MKT 301</td>
<td>3</td>
</tr>
<tr>
<td>MIS 300</td>
<td>4</td>
</tr>
<tr>
<td>Nonbusiness Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Eighth Quarter

<table>
<thead>
<tr>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 302</td>
</tr>
<tr>
<td>MGT 300</td>
</tr>
<tr>
<td>MKT 302</td>
</tr>
<tr>
<td>LAW 350</td>
</tr>
<tr>
<td>Nonbusiness Electives</td>
</tr>
</tbody>
</table>

Ninth Quarter

<table>
<thead>
<tr>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS 306</td>
</tr>
<tr>
<td>MKT 303</td>
</tr>
<tr>
<td>MKT 356</td>
</tr>
<tr>
<td>EC 320</td>
</tr>
</tbody>
</table>

Senior Year

<table>
<thead>
<tr>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 416</td>
</tr>
<tr>
<td>MKT Elective*</td>
</tr>
<tr>
<td>MGT Elective*</td>
</tr>
<tr>
<td>MGT 490</td>
</tr>
<tr>
<td>MKT 446</td>
</tr>
</tbody>
</table>

*Any junior/senior marketing course not already required.

Marketing Minor

See Business Minors, page 149.
Admissions and Advising

Students must apply for admission to the College of Science and Mathematics. Applicants must meet the following requirements: completion of at least 24 credit hours with a minimum GPA of 2.0 overall; completion of at least two courses in the College of Science and Mathematics (or transfer equivalents) with minimum grades of "C." Individual departments may specify requirements, such as specific courses or higher GPAs overall or in the major only.

After the office of the dean reviews each student’s application, the student will be assigned an advisor in the appropriate department who will help the student develop a program of study.

Degrees and Areas of Study

Requirements for the Bachelor of Science Degree

To be eligible for the Bachelor of Science degree, students must:

1. fulfill the university General Education requirements.
2. complete the residency requirement of 45 credit hours at Wright State. At least 15 of the last 45 hours for the degree must be taken in residence, and at least 30 hours must be taken at Wright State at the 300-level or above.
3. complete at least 18 credit hours of acceptable academic work with at least a 2.0 cumulative GPA and at least a 2.0 GPA in a major field. A student may find it necessary to earn more than 18 credit hours to meet the requirements of the curriculum chosen. In certain programs, a grade of "C" or better must be earned in specified courses.
4. complete at least 75 credit hours in advanced courses (numbered 200 and above) applicable to the degree.
5. complete at least 54 credit hours in one department; by permission of the department chair, up to 18 hours of this requirement may be taken in a closely related field.


Dean: Roger Gilpin
Associate Dean: Robert Weisman
Assistant Dean: Joyce Howes

Department/Chair

Anatomy: Jane N. Scott
Biochemistry and Molecular Biology: Daniel T. Organisciak
Biological Sciences: Michele Wheatly
Chemistry: Paul Seybold
Geological Sciences: Paul Wolfe
Mathematics and Statistics: Manley Perkel
Physics: Gust Bambakidis
Physiology and Biophysics: Peter K. Lauf
Psychology: Wayne Shebilske

The College of Science and Mathematics offers programs leading to bachelor’s degrees in several disciplines. The Bachelor of Science degree is offered in biological sciences, chemistry, integrated environmental sciences, geological sciences, mathematics, medical technology, physics, and psychology. Bachelor of Arts programs are available in biological sciences, chemistry, geological sciences, mathematics, and psychology. The college also offers master’s and doctoral degrees in certain programs. Interdisciplinary baccalaureate programs are offered by some departments, such as environmental sciences, geological sciences, mathematics, and physics. Preprofessional programs for students planning to teach science or mathematics in grades 7–12 are available in biological sciences, integrated environmental sciences, geological sciences, mathematics and statistics, and physics.

Dual majors programs are available in some departments (e.g., chemistry-business); students should discuss any specific interest with the college advisor. Dual majors will receive a Bachelor of Science degree when both of the departments are in the College of Science and Mathematics, if approved by both departments. Students interested in certain professional programs ordinarily can take one of the science curricula or a modified program that will be acceptable for graduation, for transfer elsewhere to the desired professional program, or for admission to the Wright State University Schools of Medicine and Professional Psychology.

With prior approval by the appropriate departments, it may be possible for students to get credit for research done on individual projects at any of the national laboratories under the Science and Engineering Research Semester (SERS) funded by
6. complete all the requirements in one of the approved programs of study established by the departments or within the college. A student must take at least 95 credit hours outside the major department.

Requirements for the Bachelor of Arts Degree

To be eligible for the Bachelor of Arts degree, students must complete the requirements listed for the Bachelor of Science and also must:

1. complete at least 27 credit hours in departments outside the College of Science and Mathematics and the College of Engineering and Computer Science. The level and type of courses to be taken are subject to the discretion and approval of the student's major department. These courses are in addition to those needed to fulfill the General Education requirements.

2. complete at least three courses in a department in either the College of Science and Mathematics or the College of Engineering and Computer Science other than the major department. These courses are in addition to those needed to fulfill the General Education requirements.

Honors Program

Departmental honors programs are available in biological sciences, chemistry, geological sciences, mathematics and statistics, physics, and psychology. These honors programs give well-qualified students the opportunity to complete an independent research project and pursue advanced course work. Students interested in pursuing an honors project should consult with the chair of the appropriate department. Honors are awarded at graduation, upon completion of requirements.

Cooperative Education Program

A cooperative education program is available that gives students the opportunity to work full time or part time in a career-related experience.

Completion of these preprofessional programs does not guarantee admission to the graduate level. master's degree teacher licensure program housed in the College of Education and Human Services (CEHS).

The CEHS graduate program will lead to a master's degree (M.Ed.) and the Adolescence to Young Adult teaching license. The admissions criteria for this program are detailed in the Wright State University Graduate Catalog. Questions should be directed to the CEHS Office of Student Services.

Student Organizations

Through involvement in student clubs and societies in the College of Science and Mathematics, students can develop closer ties with other students in the same major. Clubs and societies available to students within the college are: for biological sciences majors: the Biology Club, Environmental Sciences Club, and Sigma Xi: Honor Society; for chemistry majors: the Chemistry Club (student affiliate of the American Chemical Society); for geological sciences majors; student chapters of the American Association of Petroleum Geologists and the Society for Exploration Geophysicists, American Institute of Professional Geologists, and Sigma Gamma Epsilon Honor Society; for physics majors: the Physics Club and Sigma Pi Sigma Honor Society; for psychology majors: the Psychology Club and Psi Chi Honor Society; and for students interested in medical school: Phi Delta Epsilon.

Anatomy

Professors Bigley, Fyffe
Associate Professors Nagy, Nieder, Pearson, Ream, Scott (chair)
Assistant Professor Alvarez

The Department of Anatomy provides limited course work for undergraduate students. Basic human anatomy is a two-quarter sequence covering the essentials of anatomy with emphasis on gross anatomy and histology, but also includes introductory neuroanatomy and embryology. The laboratory portion of the course incorporates the use of cadavers and computer programs. The course provides a strong academic background for those planning to enter the life sciences, nursing, medicine, or other health-related professions. Opportunities for undergraduates to participate in special projects focused on human structure are available.

The department also offers graduate courses in the areas of gross anatomy, microanatomy, embryology, and neuroscience for a Certificate in Anatomy (three quarters) and for master's degree candidates with course option (seven quarters) or with thesis option (two years). In addition, the department provides course work at the doctoral level in the Biomedical Sciences Ph.D. program.
Biochemistry and Molecular Biology

Professors  Leffak, Organisciak (chair), Prochaska, Weisman
Associate Professors  Alter, Berberich, Fritz (Emeritus), Paietta, Reo, Turchi, Wooley

The Department of Biochemistry and Molecular Biology offers courses in metabolism, the molecular aspects of gene expression and cellular processes, and nutrition. Although the department does not have a formal baccalaureate degree program, these courses can serve as a concentration for those interested in building a background in biochemistry before pursuing a career in medicine or related biomedical sciences.

Honors Program

Under the biological sciences honors program, it is possible for students to do an undergraduate honors thesis with a faculty member from the Department of Biochemistry and Molecular Biology. Students interested in this area of study need background courses in biology, other life sciences, and chemistry.

Biological Sciences

Professors  Arlian, Burton, Carmichael, Girón, Goldstein, Hull, Isaacs, Kantor (Emeritus), Runkle, Wheatly (chair), Wood
Associate Professors  Amon, Baird, Grasman, Krane, Mamrak, Miller, Pohlman, Tomlin
Assistant Professors  Cipollini, Hiskey (WSU-Lake Campus),
Clinical Laboratory Science Program  Phyllis Pacifico (Director), Kirsch, Van’t Hof

The Department of Biological Sciences offers the following degree programs: Bachelor of Science and Bachelor of Arts in biological sciences, Bachelor of Science in Clinical Laboratory Science, Bachelor of Science in environmental sciences, Bachelor of Science in Biology with an Exercise Science option, and Master of Science in biological sciences. A new 2+2 program in Allied Health Areas is now available along with a dual major program in chemistry.

There are minimum grade requirements for departmental courses in each of the undergraduate degree programs. See degree requirements for specific programs for details.

The teaching and research programs of the department are conducted in modern, well-equipped classrooms and laboratories. A 200-acre biology preserve on campus and nearby parks and preserves such as the Beavercreek Wetlands provide excellent opportunities for terrestrial and aquatic field studies.

Students must plan their individual programs of study with the help of a departmental advisor to be sure they are meeting university, college, and departmental requirements. Many undergraduate students include faculty-guided, independent research projects in their academic programs.

Biological Sciences

The Bachelor of Science curriculum offers a broad, integrated, and in-depth approach to the life sciences. The departmental requirements consist of a balanced core of courses selected from several subject areas, combined with elective courses from the Departments of Biological Sciences, Anatomy, Physiology and Biophysics, Biochemistry and Molecular Biology, and Microbiology and Immunology.

Within this degree, several different options are open to students. The programs of study can accommodate students with such differing interests and objectives as graduate work in molecular biology, laboratory work in microbiology, or field work in ecology. It can also serve as preprofessional preparation for medical, dental, or veterinary sciences.

Degree Requirements—Biological Sciences

Bachelor of Science Degree

Students must achieve a grade of "C" or better in each course used to fulfill the Departmental Requirements of the degree.

General Education Requirements  42
Required Substitutions, which are also major program requirements:
BIO 112, 114, 115
MTH 228 or 229 and 230, or STT 264 and 265

Departmental Requirements  75
Area A (three courses)
BIO 112, 114, and 115  12

Area B (six courses)
BIO 210, 211, 212, 252; 253 or 254; 255 or 256  27

Area C
BIO 410, 492  6
Exercise Science

Exercise science consists of three major areas of study, namely: exercise physiology, human motor behavior, and human biomechanics. This program is designed to promote and integrate scientific research, education, and practical applications of all aspects of exercise science to prepare the undergraduate in fields of physical performance, fitness, health/wellness, and research. Course work and practical experience is designed with the latest American College of Sports Medicine objectives for comprehensive knowledge in the field. Outcomes of study include the opportunity to take the American College of Sports Medicine (ACSM) and the National Strength and Conditioning Association (NSCA) certification exams.

Degree Requirements—Biological Sciences/Exercise Science Option

Bachelor of Science Degree

Students must achieve a grade of "C" or better in each course to fulfill the department’s requirements for the degree.

General Education Requirements

Required Substitutions, which are also major program requirements:
BIO 112, 114, 115; MTH 130; STT 264 and 265

Departmental Requirements

Area A (three courses)
BIO 112, 114, and 115

Area B (six courses)
BIO 194, 210, 212, 221, 352, 353, 354, 451, 456, and 482

Area C (five practicum)
BIO 266, 366, 466

Area D (life science electives)
A minimum of 10 credit hours selected from 300- and 400-level courses in the College of Science and Mathematics, Departments of Anatomy, Biochemistry and Molecular Biology, Microbiology and Immunology, and/or Physiology and Biophysics. Up to 10 credits may be selected from chemistry, geological sciences, mathematics and statistics, physics, and/or psychology. With departmental permission, one additional course from Area B may be used in Area D. Up to eight credits of independent study courses (BIO 399, 488, 492, and 499) may apply. Departmental honors students may apply up to 12 hours of BIO 495.

Required Supporting Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121, 122, 123</td>
<td>15</td>
</tr>
<tr>
<td>CHM 211/215, 212/216, 213/217</td>
<td>18</td>
</tr>
<tr>
<td>PHY 111/110, 112/110, 113/110 or 240/200, 242/202, 244/204</td>
<td>15</td>
</tr>
<tr>
<td>MTH 229 or 228; and STT 264, 265; or MTH 229, 230, 231</td>
<td>13–15</td>
</tr>
<tr>
<td>Each student must also complete a laboratory course in analytical chemistry or a course in computer science (CS 205 recommended).</td>
<td>4–7.5</td>
</tr>
<tr>
<td>Electives</td>
<td>8.5–14</td>
</tr>
</tbody>
</table>

Total (minimum requirement) 196

Degree Requirements—Biological Sciences

Bachelor of Arts Degree

The Bachelor of Arts curriculum is less structured than the Bachelor of Science curriculum. It provides a substantial foundation in the biological and physical sciences, while the large number of
electives allows students considerable flexibility to meet their individual educational objectives. Students must work with their advisor to formulate a specific plan of study.

Students must achieve a grade of “C” or better in each course used to fulfill the departmental requirements and the departmental electives of this degree.

**General Education Requirements** 42

**Required Substitutions, which are also major program requirements:**
- BIO 112, 114, 115
- STT 264, 265

**Departmental Requirements** 45

**Area A (three courses)**
- BIO 112, 114, 115 12

**Area B (six courses)**
- BIO 210, 211, 212, 252, 253 or 254, 255 or 256 27

**Area C**
- BIO 410, 492 6

**Required Supporting Courses** 47

- CHM 121, 122, 123 15
- CHM 211, 212, 213, 215 14
- PHY 111/101, 112/102, 113/103 15
- MTH 130, 145 or STT 264, 265 10

**Electives** 62

1. Select a minimum of 15 credits from 300- and 400-level courses in the Department of Biological Sciences (BIO prefix). You may apply up to five credits of independent study courses (BIO 399, 488, 492, 495, and 499).
2. Select a minimum of 15 credits from 300- and 400-level courses and minimum of 15 credits from 100- and 200-level courses all outside the College of Science and Mathematics and the College of Engineering and Computer Science.
3. At least three courses in a department in the College of Science and Mathematics or the College of Engineering and Computer Science other than the Department of Biology.

**Total (minimum requirement)** 196

**Minor Program**

Students majoring in another department may earn a minor in biological sciences. The minor includes at least 36 credit hours from a broad selection of courses in both biological sciences and environmental health distributed as follows:

<table>
<thead>
<tr>
<th>Electives</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 112, 114, 115 (or nonmajor equivalents, with approval)</td>
<td>12</td>
</tr>
<tr>
<td>BIO 492</td>
<td>2</td>
</tr>
<tr>
<td>BIO or approved EH electives</td>
<td>20</td>
</tr>
</tbody>
</table>

Minimum entry requirements include 24 hours (or equivalent) of previous university coursework with grades of “C” or better, and an overall 2.0 GPA in three introductory biology courses (BIO 112, 114, 115 preferred). Successful completion of a biological sciences minor requires a grade of “C” or better in program courses. Note that many BIO and EH courses themselves have specific course prerequisites.

**Clinical Laboratory Science**

**(Previously Medical Technology)**

The clinical laboratory science program includes three years of prescribed study at Wright State University and a one-year clinical laboratory curriculum in a clinical laboratory science program accredited by the American Medical Association Council on Medical Education through the National Accrediting Agency of Clinical Laboratory Sciences (NAACLS). Upon successfully completing the program, students receive the Bachelor of Science in Clinical Laboratory Science degree. They also become eligible to take the national certification examination given by the Board of Registry for Medical Technologists (ASCP) and the CLS examination administered by the National Certification Agency for Laboratory Personnel. Through special arrangements, students may obtain their clinical education in other programs of clinical laboratory science accredited by the NAACLS after they receive approval from the chair of the Department of Biological Sciences.

In the fall quarter of their preclinical year, students apply, through the department, for admission into the clinical laboratory program. Criteria used to determine admission include the academic record, letters of recommendation, and results of a personal interview. The number of positions in each class for the clinical year program is limited.

**Degree Requirements—Clinical Laboratory Science**

**(Previously Medical Technology)**

**Bachelor of Science in Clinical Laboratory Science Degree**

Students must achieve a grade of “C” or better in each course used to fulfill the departmental requirements and clinical program requirements of this degree.
Clinical Laboratory Science Clinical Year Program

The College of Science and Mathematics offers a comprehensive Clinical Laboratory Science Clinical Year Program that provides participating students with the academic preparation and clinical skills needed to be a qualified practitioner. The curriculum begins in June and includes one quarter of basic lecture/laboratory courses on campus, followed by three quarters of supervised clinical rotations in nine cooperating affiliated clinical facilities: The Children’s Medical Center, Veterans Affairs Medical Center, Greene Memorial Hospital, Good Samaritan Hospital and Health Center, Upper Valley Medical Center, Reid Hospital, Miami Valley Hospital, McCullough-Hyde Memorial Hospital, and CompuNet Clinical Laboratories. Upon successfully completing the program, students are eligible to receive the Bachelor of Science in Clinical Laboratory Science degree, provided they meet the requirements for the degree stated in this catalog.

Prerequisites, Application, and Admission

Requirements for admission to the clinical year program are set by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Prerequisites include inorganic chemistry, organic chemistry and/or biochemistry, general biological sciences, microbiology, immunology, and mathematics. Applicants must also have a bachelor’s degree or be eligible for one upon completing the clinical program and an overall GPA of 2.5.

Eligible applicants from nonaffiliated universities will be considered. These applicants must also meet NAACLS requirements before they can enter the program.

Applicants with a foreign baccalaureate degree must meet NAACLS criteria before they enter the clinical year program.

Admission to Wright State University does not automatically guarantee admission into the clinical year program.

Applicants should submit their application materials and schedule an interview with Clinical Laboratory Science Program director during the fall quarter of the year before they enter the program.

Curriculum Outline

<table>
<thead>
<tr>
<th>Course Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL 420—Introduction to Clinical Lab Science</td>
</tr>
<tr>
<td>CL 431—Urinary and Body Fluid Analysis</td>
</tr>
<tr>
<td>CL 441—Hematology</td>
</tr>
<tr>
<td>CL 451—Principles of Homeostasis</td>
</tr>
<tr>
<td>CL 461—Clinical Chemistry</td>
</tr>
<tr>
<td>CL 471—Diagnostic Microbiology</td>
</tr>
<tr>
<td>CL 481—Immunology/Serology</td>
</tr>
<tr>
<td>CL 491—Immunohematology/Transfusion Medicine</td>
</tr>
<tr>
<td>CL 492—Advanced Hematology</td>
</tr>
<tr>
<td>CL 462—Advanced Clinical Chemistry</td>
</tr>
<tr>
<td>CL 472—Advanced Diagnostic Microbiology</td>
</tr>
<tr>
<td>CL 492—Advanced Immunohematology</td>
</tr>
<tr>
<td>CL 422—Laboratory Management</td>
</tr>
<tr>
<td>CL 423—Clinical Pathology Seminar</td>
</tr>
<tr>
<td>CL 443—Clinical Hematology Practicum</td>
</tr>
<tr>
<td>CL 463—Clinical Chemistry Practicum</td>
</tr>
<tr>
<td>CL 473—Clinical Microbiology Practicum</td>
</tr>
<tr>
<td>CL 493—Clinical Transfusion Medicine Practicum</td>
</tr>
</tbody>
</table>

Total 59

Allied Health Programs

Students can begin with two years at Wright State University and gain an excellent foundation while checking off many of the early college requirements for application to the Ohio State programs listed below.

Allied Health Areas

- Medical Dietetics
- Circulation Technology
- Health Information Management and Systems
- Occupational Therapy
- Radiological Technology
- Respiratory Therapy
Students wanting a degree in Physical Therapy should complete the Bachelor’s of Science in Exercise Science and then transfer to Ohio State’s Master’s in Physical Therapy.

**Allied Health Program Requirements:**

**The First Two Years**

**Medical Dietetics**
Dietitians combine education, practice and research in food, nutrition and health, diet, and food choices. Dietitians offer nutrition education for groups and provide diet counseling for persons of all ages. Graduates may manage food-service operations in health care settings, and they often advance to general management positions in hospitals and nursing homes.

<table>
<thead>
<tr>
<th>Program Prerequisites</th>
<th>34</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>5</td>
</tr>
<tr>
<td>Psychology</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry</td>
<td>10</td>
</tr>
<tr>
<td>Biology</td>
<td>5</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>Sociology</td>
<td>5</td>
</tr>
<tr>
<td>General Education Curriculum</td>
<td></td>
</tr>
</tbody>
</table>

**Circulation Technology**
A circulation technologist is essential to the performance of heart/lung bypass in support of the patient undergoing open heart surgery and other diagnostic procedures. The work is challenging and demanding with on-call hours and weekend/holiday schedules. CT specialists are typically found only in major metropolitan health care centers.

<table>
<thead>
<tr>
<th>Program Prerequisites</th>
<th>45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>5</td>
</tr>
<tr>
<td>Math</td>
<td>4</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>6</td>
</tr>
<tr>
<td>Human Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>Physics</td>
<td>10</td>
</tr>
<tr>
<td>Chemistry</td>
<td>10</td>
</tr>
<tr>
<td>Statistics</td>
<td>5</td>
</tr>
<tr>
<td>General Education Curriculum</td>
<td></td>
</tr>
</tbody>
</table>

**Health Information Management and Systems**
The health information administrator provides critical data for business decision-making in clinical operations, health care, and related organizations. This person may manage the systems and people, or analyze information. Opportunities for practice are found in a variety of settings such as hospitals, managed care organizations, behavioral and long term care facilities, insurance companies, and government agencies.

<table>
<thead>
<tr>
<th>Program Prerequisites</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>5</td>
</tr>
<tr>
<td>Math</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>Statistics</td>
<td>5</td>
</tr>
<tr>
<td>Physics</td>
<td>10</td>
</tr>
<tr>
<td>Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Classics</td>
<td>3</td>
</tr>
<tr>
<td>CPR certification</td>
<td></td>
</tr>
<tr>
<td>General Education Curriculum</td>
<td></td>
</tr>
</tbody>
</table>

**Occupational Therapy**
Occupational therapy is a profession concerned with the optimal development of physical and emotional abilities. Therapists prescribe a treatment program designed for a patient’s particular needs, both physical and psychological. They then determine the appropriate therapy and activities to meet the needs of that patient. Occupational therapists work in children’s hospitals, rehabilitation centers, psychiatric clinics, sheltered workshops, and other community agencies. Some therapists establish their own private practices.

<table>
<thead>
<tr>
<th>Program Prerequisites</th>
<th>49</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>5</td>
</tr>
<tr>
<td>Human Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Biology</td>
<td>10</td>
</tr>
<tr>
<td>Statistics</td>
<td>5</td>
</tr>
<tr>
<td>Physics</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Psychology</td>
<td>5</td>
</tr>
<tr>
<td>Sociology</td>
<td>5</td>
</tr>
<tr>
<td>Handicrafts</td>
<td>4</td>
</tr>
</tbody>
</table>

**Radiological Technology**
The RT position works independently and as an assistant to a radiologist or physician. They prepare patients, dispense x-radiation, and develop film to aid in the diagnosis of medical conditions. Examinations are often performed in the emergency room, at the patient’s bedside, and in surgery. Computers are utilized to acquire, manipulate, and store medical images. Positions available in hospitals, clinics, imaging centers, and physicians’ offices allow flexibility. Radiographers are in high demand, and many employers have initiated hiring incentives.

<table>
<thead>
<tr>
<th>Program Prerequisites</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>5</td>
</tr>
<tr>
<td>Math</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>Statistics</td>
<td>5</td>
</tr>
<tr>
<td>Physics</td>
<td>10</td>
</tr>
<tr>
<td>Physiology</td>
<td>5</td>
</tr>
<tr>
<td>CPR certification</td>
<td>3</td>
</tr>
<tr>
<td>General Education Curriculum</td>
<td></td>
</tr>
</tbody>
</table>
Respiratory Therapy

Respiratory therapists provide respiratory care in hospitals, medical offices, and in patient homes through the use of life support equipment. Therapists measure cardiopulmonary volumes, pressure, electrocardiograms, and blood gases. They provide ventilator life support, administer medical gases, and perform cardiopulmonary monitoring and resuscitation.

Respiratory therapists work for medical equipment manufacturers and pharmaceutical companies in sales, research, development, and as clinical applications specialists.

Program Prerequisites: 62

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>5</td>
</tr>
<tr>
<td>Biology</td>
<td>5</td>
</tr>
<tr>
<td>Psychology</td>
<td>5</td>
</tr>
<tr>
<td>Math</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry</td>
<td>10</td>
</tr>
<tr>
<td>Physics</td>
<td>10</td>
</tr>
<tr>
<td>Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>Physiology</td>
<td>5</td>
</tr>
<tr>
<td>Classics</td>
<td>3</td>
</tr>
<tr>
<td>Statistics</td>
<td>5</td>
</tr>
</tbody>
</table>

Environmental Health Sciences

Our program is one of only 24 nationwide accredited by the National Environmental Health Science and Protection Accreditation Council. The curriculum in environmental health sciences provides students with a sound academic background and the specialized training needed for them to work effectively in several areas involving environmental quality management. Career opportunities include work in public health and environmental protection agencies, environmental consulting firms and analytical laboratories, and health and safety programs in industries as well as natural resource management. The program also prepares students for graduate programs in public health and environmental sciences. A field internship program, operated in cooperation with participating environmental health agencies or industries, gives students an opportunity to gain practical work experience. Students should consult with their advisor when planning their program to ensure that it meets their needs and interests.

Degree Requirements—Environmental Health Sciences

Bachelor of Science Degree

A grade of "C" or better must be achieved in each course used to fulfill the environmental sciences core, required supporting courses in biological sciences, environmental specialty courses, and supporting electives units of this degree.

General Education Requirements 59

Required Substitutions, which are also major program requirements:

BIO 112, 114, 115
MTH 228

Science and Communication Core 72

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 252, 278, 279, 408, 415</td>
<td></td>
</tr>
<tr>
<td>CHM 121, 122, 123, 211, 212, 213, 215, 216, 217</td>
<td></td>
</tr>
<tr>
<td>PHY 111/101, 112/102</td>
<td></td>
</tr>
<tr>
<td>STT 264, 265</td>
<td></td>
</tr>
</tbody>
</table>

Environmental Sciences Core 52

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EH 292, 360, 362, 364, 368, 431, 461, 462, 466/467, 472</td>
<td></td>
</tr>
<tr>
<td>EH 401—Ecotoxicology</td>
<td></td>
</tr>
<tr>
<td>EH 492 or BIO 492 or EH 401—Environmental Sciences Seminar</td>
<td></td>
</tr>
<tr>
<td>EH 366 (field internship)</td>
<td></td>
</tr>
<tr>
<td>EH 401—Environmental Law</td>
<td></td>
</tr>
</tbody>
</table>

Environmental Specialty 16–18

Option A:

Public Health 16

EH 463

BIO 464/475
BIO 476/477  
+ three credit hours of approved science elective  
Option B:  
Industrial Hygiene and Environmental Protection  
EH 468
EH 454
BIO 413
EH 401 — Occupational Ergonomics
CHM 302
Option C: Natural Resources Management
EH 453
BIO 306
BIO 407 or 411 or 473
GEO 447 or GL 461
Total 199–201

*In a program such as this, the order in which courses are taken is of extreme importance. The required program should be followed, and all individual course schedules should be planned with an advisor.

**Biological Sciences Education**

Students who wish to teach biology or chemistry in Ohio public high schools can pursue the B.A. or B.S. degree in biological sciences. Upon completion of this undergraduate degree program in the College of Science and Mathematics, students then need to complete the Professional Educators Program (PEP) Master of Education degree (M.Ed.) through Wright State’s College of Education and Human Services. Graduates of the B.A. or B.S. in biological sciences and the M.Ed. Professional Educators Program are then eligible to seek licensure from the Ohio Department of Education in Life Sciences or Life Sciences/Chemistry, depending on the content of the undergraduate curriculum.

**Degree Requirements—Biological Sciences Education**

**Bachelor of Science Degree (Life Sciences/Chemistry)**

The Adolescent to Young Adult Life Sciences/Chemistry Licensure Program is based on an undergraduate Bachelor of Science degree in biological sciences.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 112, 114, 115</td>
<td>42</td>
</tr>
<tr>
<td>MTH 229, 230</td>
<td>75</td>
</tr>
<tr>
<td>BIO 210, 211, 212, 252, 253 or 254, 255 or 256</td>
<td>12</td>
</tr>
<tr>
<td>BIO 410, 492</td>
<td>6</td>
</tr>
</tbody>
</table>

**Life Science Electives**

Selected from 300- and 400-level courses. At least 15 credits must have BIO prefix. Must include CHM 312/314 and CHM 451.

**Related Supportive Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121, 122, 123</td>
<td>15</td>
</tr>
<tr>
<td>CHM 211/215, 212/216, 213/217</td>
<td>18</td>
</tr>
<tr>
<td>MTH 229, 230, 231</td>
<td>15</td>
</tr>
<tr>
<td>PHY 240/200, 242/202, 244/204</td>
<td>16</td>
</tr>
<tr>
<td>GL 251/252</td>
<td>4.5</td>
</tr>
</tbody>
</table>

**Phase One Professional Education Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED 221, 223, 301, 303; EDS 333</td>
<td>15</td>
</tr>
</tbody>
</table>

**Total** 200.5

**Degree Requirements—Biological Sciences Education**

**Bachelor of Science Degree (Life Sciences)**

The Adolescent to Young Adult Life Sciences Licensure Program is based on an undergraduate Bachelor of Science degree in biological sciences.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 112, 114, 115</td>
<td>42</td>
</tr>
<tr>
<td>MTH 228 or 229, 230 or STT 264, 265</td>
<td>75</td>
</tr>
</tbody>
</table>

**Departmental Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 112, 114, 115</td>
<td>12</td>
</tr>
<tr>
<td>BIO 210, 211, 212, 252, 253 or 254, 255 or 256</td>
<td>27</td>
</tr>
<tr>
<td>BIO 410, 492</td>
<td>6</td>
</tr>
</tbody>
</table>

**Life Science Electives**

Selected from 300- and 400-level courses. At least 15 credits must have BIO prefix. Up to 15 credits may be selected from the Departments of Anatomy, Biochemistry and Molecular Biology, Microbiology and Immunology, and/or Physiology and Biophysics. Up to 10 credits may be selected from chemistry, geological sciences, mathematics and statistics, physics, and/or psychology. With departmental permission, one additional course from Area B may be used in Area D. Up to eight credits of independent study courses (BIO 399, 488, 492, and 499) may apply. Departmental honors students may apply up to 12 credits of BIO 495.

**Related Supportive Courses** 83.5–90

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121, 122, 123</td>
<td>15</td>
</tr>
<tr>
<td>CHM 211/215, 212/216, 213/217</td>
<td>18</td>
</tr>
<tr>
<td>GL 251/252, 253/254, 255/256</td>
<td>3.5</td>
</tr>
<tr>
<td>(13.5 credits total—10 credits will apply to life science electives)</td>
<td>3.5</td>
</tr>
<tr>
<td>MTH 229, 230, 231</td>
<td>15</td>
</tr>
</tbody>
</table>
**Degree Requirements—Biological Sciences Education**

**Bachelor of Arts Degree (Life Sciences)**

The Adolescent to Young Adult Life Sciences Licensure Program is based on an undergraduate Bachelor of Science degree in Biological Sciences.

**General Education Requirements** 42

**Required Substitutions:**
- BIO 112, 114, 115
- STT 264, 265

**Departmental Requirements** 45

- BIO 112, 114, 115 12
- BIO 210, 211, 212, 252, 253 or 254, 255 or 256 27
- BIO 410, 492 6

**Required Supporting Courses** 72.5

- CHM 121, 122, 123 15
- CHM 211/215, 212/216, 213/217 18
- GL 251/252, 253/254, 255/256 13.5
- MTH 130; STT 264, 265 or MTH 143 11
- PHY 111/101, 112/102, 113/103 15

**Electives** 42

Must include the following:

1. Select 15 credits from 300- and 400-level courses in the Department of Biological Sciences (BIO prefix). You may apply up to five credits of independent study courses (BIO 399, 488, 492, 495, 499).

2. Twenty-seven credit hours in academic courses outside the College of Science and Mathematics and the College of Engineering and Computer Science (must include ED 211, 223, 301, 303, EDS 333).

3. At least 23 of the elective credit hours in courses at the 200 level or above.

**Total** 201.5

---

**Biological Sciences Honors Program**

An honors program allows qualified students to carry out independent projects under the guidance of faculty sponsors. Students who have maintained a cumulative GPA of 3.4 during the preceding three quarters may apply to the Department of Biological Sciences to pursue an honors program. Application for admission to the program should be made during the student's junior year. Students interested in the honors program should contact the departmental office.

---

**Dual Major Program**

The Department of Biological Sciences participates in the university's dual major program with the Department of Chemistry. Students should refer to the Department of Biological Sciences office for program requirements.

---

**Chemistry**

*Professors* Battino (Emeritus), Feld, Fortman (Emeritus), Gilpin (Dean), Goldfarb (Emeritus), Katovic, Servé, Seybold (Chair).

*Associate Professors* Bombick, Dolson, Grossie, Hess (Emeritus), Ketcha, McGowin, Turnbull

*Assistant Professors* Cook (Emerita), Fossom, Lunsford

The Department of Chemistry offers programs leading to the Bachelor of Arts, Bachelor of Science, and Master of Science degrees in chemistry. The Bachelor of Science in Education degree is also available with a concentration in chemistry. The Bachelor of Arts and Bachelor of Science curricula are designed to prepare undergraduate students for careers as professional chemists, entrance into medical or dental schools, or graduate work in chemistry. Both programs are flexible and permit the options of a heavy concentration in chemistry courses or a combination of a chemistry major with extensive course work in allied (other sciences) or nonalied (e.g., business, arts) areas. In order to develop their academic programs to meet specific needs and individual interests, students should consult their academic advisors. The Bachelor of Science program is certified by the American Chemical Society.
Degree Requirements—Chemistry

Bachelor of Science Degree

The Bachelor of Science candidate is required to complete the chemistry, mathematics, and physics course sequences in the following program outline with these exceptions: CHM 499. Special Problems in Chemistry, is not required. However, it is expected that the serious chemistry major will complete at least four credit hours of this research course during the senior year.

In the Bachelor of Science program with an orientation for premedical students or others wishing a broader science base, CHM 319, 417, 420, 421, 425, and BMB 421 are not required. The physics requirement may be met with the PHY 111, 112, 113 sequence and PHY 101, 102, 103 laboratories, BIO 112, 114, and 115 are required. At least two courses must be selected from BIO 210, 211, 212, 252, 256, 303, 305, 403. Courses in other sciences may substitute for these BIO courses with departmental permission. In addition, students must take at least eight credit hours selected from BMB 421, 423; CHM 402, 417, 420, 421, 440, 441, 443, 444, 461, 465/467. Students serious about medical school should elect BMB 421 and 423. Students should also be careful to fulfill all university and college degree requirements. Copies of a more stringent premedical program may be obtained from the chemistry department.

Because the order in which science courses are taken is so important, students are advised to begin the mathematics, chemistry, and physics sequences as soon as possible.

General Education Requirements 42

<table>
<thead>
<tr>
<th>Required Substitutions:</th>
<th>MTH 229, 230</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121, 122, 123</td>
<td></td>
</tr>
</tbody>
</table>

Departmental Requirements 82

| CHM 121, 122, 123 | 15 |
| CHM 211/215, 212/216, 213/217 | 18 |
| CHM 312/314, 417, 419, 451, 452, 453, 457, 458 | 28.5 |
| CHM 420, 421, 425, 435/436, BMB 421 | 20.5 |

Related Course Requirements 31

| MTH 229, 230, 231 | 15 |
| PHY 240/200, 242/202, 244/204 | 16 |
| Electives | 41 |

CHM 499 and EGR 153 are recommended along with at least one year of a foreign language.

Total 196

Degree Requirements—Chemistry

Bachelor of Arts Degree

The Bachelor of Arts degree candidate is required to complete the chemistry, mathematics, and physics course sequences in the following program outlines. Additional requirements include 12 hours of science electives and two years of foreign language study. The science elective requirement may be satisfied with any course sequence in the College of Science and Mathematics or the College of Engineering and Computer Science, including additional chemistry courses or individual research projects (CHM 499). The foreign language requirement may be satisfied with two years of study in any foreign language or one year each of two languages.

Chemistry majors who are Bachelor of Arts degree candidates are also required to earn 27 credit hours (18 of which must be 200 level or above) outside the Colleges of Science and Mathematics and Engineering and Computer Science. This requirement may not be satisfied with courses used to fulfill foreign language or General Education requirements. In order to ensure a reasonably high level of exposure in some area, it is further required that students complete at least 30 hours in courses numbered 300 or higher applicable to the degree.

General Education Requirements 42

Required Substitutions:

<table>
<thead>
<tr>
<th>MTH 229, 230</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121, 122, 123</td>
</tr>
</tbody>
</table>

Departmental Requirements 53.5

| CHM 121, 122, 123 | 15 |
| CHM 211/215, 212/216, 213/217 | 18 |
| CHM 312/314, 451, 452/457, 453/458 | 20.5 |

Related Course Requirements 42-43

| MTH 229, 230, 231 | 15 |
| PHY 240/200, 242/202, 244/204, or 111/101, 112/102, 113/103 | 15-16 |
| Science electives | 12 |
| Foreign Language Requirement | 21 |

Additional Courses outside Science and Mathematics and Engineering and Computer Science 27

Electives 7-8

Total (minimum requirement) 193.5
Dual Major Degree Requirements—Chemistry

Dual Major Requirements in Chemistry

General Education Requirements:  42

Required Substitutions:
MTH 229, 230
CHM 121, 122, 123

Departmental Requirements:  53.5
CHM 121, 122, 123  15
CHM 211/215, 212/216, 213/217  18
CHM 312/314, 451, 452/457, 453/458  20.5

Related Course Requirements:  30–31
MTH 229, 230, 231  15
PHY 240/200, 242/202, 244/204, or 111/101, 112/102, 113/103  15–16

Second Component of Dual Major:  67–68

Total (minimum requirement):  193.5

Chemistry Education

Students who wish to teach chemistry in Ohio public high schools can pursue the Bachelor of Science degree in chemistry. Upon completion of this undergraduate degree program in the College of Science and Mathematics, students then need to complete the Professional Educators Program (PEP) Master of Education degree (M.Ed.) through Wright State’s College of Education and Human Services. Graduates of the B.S. in chemistry and the M.Ed. Professional Educators Program are then eligible to seek licensure from the Ohio Department of Education in chemistry or chemistry in combination with another science field depending on the content of the undergraduate curriculum.

Degree Requirements—Chemistry Education

Bachelor of Science in Chemistry—Chemistry Education

The Adolescence to Young Adult Chemistry Licensure Program is based on an undergraduate Bachelor of Arts degree in physics.

General Education Requirements:  42

Required Substitutions:
MTH 229, 230
CHM 121, 122, 123

Departmental Requirements:  76.5
CHM 121, 122, 123
CHM 211/215, 212/216, 213/217, 312/314
CHM 451, 452, 453, 457, 458
CHM 499 (9 hours)

Chemistry Electives (9 hours)

Recommended Courses: CHM 417, 420, 421, 435/436; BMB 421

Related Course Requirements:  67.5
BIO 112, 114  8
PHY 240/200, 242/202, 244/204  16
GL 251/252, 253/254, 255/256  13.5
MTH 229, 230, 231  15
Phase One Professional Education Courses:
ED 221, 223, 301, 303, EDS 333  15

Unrestricted Electives:  13

Total:  196

Chemistry Honors Program

Qualified students may be admitted to the departmental honors program during their second or third year. The program involves work beyond the minimum course requirement for the B.S. degree with emphasis on independent studies.

Geological Sciences

Professors Gregor, Kulander, Richard (Emeritus), Schmidt (Emeritus), Unruh (Emeritus), Wolfe (Chair)

Associate Professors Agrawal, Carney, Cheng, Domino, Hauzer, Kramer (Emeritus), Ritzi, Slattery

Assistant Professors Brane, Strickland (WSU-Lake Campus), Watts

The Department of Geological Sciences offers programs leading to the Bachelor of Science and Bachelor of Arts degrees in geological sciences. Both programs are designed to include geology and related sciences and to prepare students for graduate study or professional employment. Professional geologists are employed in protecting and enhancing existing resources (environment, surface, and ground waters) as well as in exploring for new resources (oil, gas, and minerals). The Bachelor of Science program is more highly structured, and through the various options offered, is intended to prepare students for specific professional or technical objectives. The Bachelor of Arts program is intended to be more flexible and to permit students with either broad or specialized interests to fulfill their program needs. The Bachelor of Arts program’s flexibility readily permits interdisciplinary programs such as
the dual major, in which students may major in two quite different fields simultaneously. A minor is also available.

Since personal objectives, interests, and aptitudes vary considerably with each individual, the department tries to offer a broad spectrum of educational options within a framework of sound academic guidelines. Students majoring in geological sciences have considerable choice in the basic program, options, and elective courses. Students should be aware of these choices as early as possible because course sequencing, particularly in Bachelor of Science options, is a critical factor. For this reason, all students are strongly urged to consult their advisor to develop an individual program.

Geological Sciences Honors Program

Candidates for the B.A. or B.S. degree in geological sciences who have a cumulative GPA of 3.0 or better may apply at the end of their junior year for admission to the departmental honors program. Requirements for graduation with honors in geological sciences are a cumulative GPA of 3.0 or better and satisfactory completion of a senior thesis under the guidance of a faculty member. The senior thesis requires a total of between six and nine credits in GL 499. Students may choose the topic from any branch of geological sciences; current course listings in this catalog may be taken as a rough indication of the range available.

Applications to the honors program should be made in writing to the Undergraduate Studies Committee, Department of Geological Sciences, and should include the following:

1. A summary proposal (of about 200 words) for a senior thesis topic
2. Expected date of graduation (which must be at least three full quarters, not including summer quarter, after the date of the application)
3. The endorsement of the student’s departmental advisor and that of the senior thesis advisor, if not the same

Electives and Requirements

Supporting electives are courses from the College of Engineering and Computer Science and the College of Science and Mathematics (excluding Psychology) that are not normal preparation or prerequisites for required courses and are not primarily designed for General Education. Up to eight credit hours of geological sciences courses may be used to satisfy this requirement. Any geological sciences course that is jointly listed with another department must be taken as a geological sciences course in order to qualify as a supporting elective. In addition to courses that satisfy the above criteria, up to eight credit hours from the courses listed below may be used as supporting electives: ATH 242, 300, 351; GEO 330, 331, 361, 362, 365, 432, 445, 446, 447, 463; PHY 107/117. Students should examine prerequisites before selecting any of these courses. GL 434—Field Geology is required for all degree options. This five-week course is held in the Smoky Mountains during the summer quarter; students reside at Maryville College in Tennessee. The department offers some courses that may be taken more than once (e.g. GL 399—Special Problems). These courses may have variable specific titles (e.g. GL 399—Paleontology and Stratigraphy of Ohio). A student may count multiple sections of such a course toward satisfying the geology elective/supporting elective requirement. However, a specific course may be applied toward this requirement only once.

Students who have taken the General Education geology sequence (100 level) are not required to take GL 251, 253, and 255. However, they are required to take GL 252, 254, and 256. Minor modifications in departmental programs will be made from time to time. It is the students’ responsibility to confer with their advisors periodically during the academic year, preferably once each quarter before registration.

Degree Requirements—Geological Sciences/General Geology Option

Bachelor of Science Degree

The Department of Geological Sciences offers a Bachelor of Science degree in geological sciences with a general geology option. The course requirements and recommended course sequences follow.

Required Education Requirements 42

Required Substitutions, which are also major program requirements:
MTH 229, 230
GL 251, 252, 253, 254, 255, 256

Departmental Requirements 77.5

GL 251/252, 253/254, 255/256 13.5
GL 381, 383, 385* 15
GL 485, 486, 487 13
GL 311, 428, (three quarters, 1.5 cr.), 434 15
Geological Sciences Electives 21

Related Course Requirements 70

CHM 121, 122, 123 or 191, 192, 193 15
CEG 220 or EGR 153 or CS 141 4
MTH 229, 230 10
PHY 240/200, 242/202, 244/204 16
STT 264 or 360 4
One course from MTH 231, STT 265 or STT 361 4–5
Supporting electives 15–16
Degree Requirements—
Geological Sciences/
Environmental Geosciences Option

Bachelor of Science Degree
The environmental geosciences option prepares the
graduate for a technical career investigating,
remediating, or managing environmental resources,
or for graduate study in these areas.

General Education Requirements

Total

Degree Requirements—
Geological Sciences/
Geophysics Option

Bachelor of Science Degree

General Education Requirements

Required Substitutions, which are also
major program requirements:
MTH 229, 230
GL 251, 252, 253, 254, 255, 256

Departmental Requirements

GL 251, 252, 253, 254, 255, 256

GL 381, 383, 385, or
GL 401, 486, 487

GL 311, 422, 428 (three quarters, 1.5 cr.),
434, 450, 485

Choose 27.5–29.5 hours from non-chosen option
above or from below:
GL 201, 304, 309, 405, 413, 421, 431, 444,
455, 461, 463, 470, 495, 499

Total

Bachelor of Arts Degree

The environmental geosciences option prepares
the graduate for a technical career investigating,
remediating, or managing environmental resources.
Its broad and flexible approach allows students to
combine scientific training with other fields such
as business and management, public policy, or
communication.
Geological Sciences Education

Students who wish to teach earth sciences in Ohio public high schools can pursue the Bachelor of Arts degree in geological sciences. Upon completion of this undergraduate degree program in the College of Science and Mathematics, students then need to complete the Professional Educators Program (PEP) Master of Education degree (M.Ed) through Wright State's College of Education and Human Services. Graduates of the B.A. or B.S. in geological sciences and the M.Ed. Professional Educators Program are then eligible to seek licensure from the Ohio Department of Education in Earth and Space Sciences, Earth Sciences/Chemistry or Life Sciences/Earth Sciences, depending on the content of the undergraduate curriculum.

Degree Requirements—Geological Sciences Education

Bachelor of Arts Degree (Earth and Space Sciences)

The Bachelor of Arts curriculum is designed for students who desire scientific training, especially through interdisciplinary programs. Because of its broad and flexible approach, students who elect to follow a Bachelor of Arts program should have specific educational objectives that can be reasonably attained through this program.

General Education Requirements 42

Required Substitutions:

GL 251/252, 253/254, 255/256 13.5

Departmental Requirements 60

Required Substitutions, which are also major program requirements:

GL 251, 252, 253, 254, 255, 256 45

GL 251/252, 253/254, 255/256 13.5

GL 311, 485, 486, 428 (three quarters, 1.5 cr.), 434 24

Geological sciences electives 22.5

Related Course Requirements 47–50

BIO 112, 114, 115, or PHY 111, 112, 113 or 12–15

CHM 121, 122, 123, or 191, 192, 193 25

Supporting electives 28

Mathematics and statistics 10

Electives outside the Colleges of Science and Mathematics and Engineering and Computer Science 27

Unrestricted Electives 10

Total 189–192
Degree Requirements—Geological Sciences Education

Bachelor of Arts Degree (Earth Sciences/Chemistry)

The Adolescent to Young Adult Earth Sciences/Chemistry Licensure Program is based on an undergraduate Bachelor of Arts degree in geological sciences.

General Education Requirements 42

Required Substitution:
GL 251/252, 253/254, 255/256
MTH 229, 230

Departmental Requirements 60

GL 251/252, 253/254, 255/256 13.5
GL 311, 485, 486, 428 (three quarters, 1.5 cr.), 434 24

Geological Sciences Electives (must include GL 201 or 304, and GL 309, 401, and 499) (Oceanography, four cr.) 22.5

Related Course Requirements 109.5

BIO 112 4
CHM 121, 122, 123 15
CHM 211/215, 212/216, 213/217, 312/314, 451 28.5
MTH 229, 230, 234 15
PHY 107/117, 240/200, 242/202, 244/204 20

Electives outside the Colleges of Science and Mathematics and Engineering and Computer Science (must include GEO 330 or 331, and ED 221, 223, 301, 303; EDS 333) 27

Total 211.5

Degree Requirements—Geological Sciences Education

Bachelor of Arts Degree (Earth Sciences/Earth Sciences)

The Adolescent to Young Adult Earth Sciences/Earth Sciences Licensure Program is based on an undergraduate Bachelor of Arts degree in geological sciences.

General Education Requirements 42

Required Substitutions
GL 251/252, 253/254, 255/256
MTH 228

Departmental Requirements 60

GL 251/252, 253/254, 255/256 13.5
GL 311, 485, 486, 428 (three quarters, 1.5 cr.), 434 24

Geological Sciences Electives (must include GL 201 or 304, and GL 309, 401, and 499) (Oceanography, four cr.) 22.5

Related Course Requirements 103

BIO 112, 114, 115, 210, 211, 212, 252, 278, 279, 426, 492 43
CHM 121, 122, 123 15
Mathematics and Statistics
(Must include MTH 228 and STT 264) 10
PHY 107/117, 111/101 8

Electives outside the Colleges of Science and Mathematics and Engineering and Computer Science (must include GEO 330 or 331, and ED 221, 223, 301, 303; EDS 333) 27

Total 205

Minor Program

Students majoring in another department may earn a minor in geological sciences. A minor in geological sciences can improve a student's credentials for employment or for acceptance into graduate school. The minor requires a minimum of 34.5 credit hours. At least 10 of the credit hours used toward the minor may not be geology courses required by the student's degree program. A GPA of 2.0 must be attained in the minor courses. A minor will be completed when the following requirements are satisfied.

Minor Requirements—Geological Sciences

Departmental Requirements 34.5

GL 251/252, 253/254, 255/256, or
GL 105, 106, 107, 252, 254, 256
A minimum of 8.5 credit hours selected from: GL 311, 381, 383, 385
GL 485, 486, 487, 434
0.5 credit hour of GL 428

Effective Courses
A minimum of 12 credit hours of geological sciences electives is required. In selecting these courses, the following applies:
1. No courses numbered below 200 are acceptable.
2. No more than four credit hours of courses numbered below 300 are acceptable.
3. No more than 1.0 credit hour of GL 428 (in addition to the 0.5 credit hour required) is acceptable.
4. No more than three credit hours of field-oriented courses (excluding GL 434) are acceptable.

Total 34.5
Integrated Science

Students who wish to teach comprehensive science in Ohio public high schools can pursue the B.S. degree in integrated science. Upon completion of this undergraduate degree program in the College of Science and Mathematics, students then need to complete the Professional Educators Program (PEP) Master of Education degree (M.Ed.) through Wright State's College of Education and Human Services. Graduates of the B.S. in integrated science and the M.Ed. Professional Educators Program are then eligible to seek licensure from the Ohio Department of Education in Comprehensive Science.

Degree Requirements—Integrated Science Education

Bachelor of Science Degree

The Adolescent to Young Adult Comprehensive Science Licensure Program is based on an undergraduate Bachelor of Science degree in the College of Science and Mathematics.

General Education Requirements 42

Required Substitutions:
BIO 112, 114, 115
MTH 229, 230

College Requirements 131

BIO 112, 114, 115, 252, 254, 278, 279, 426 34
CHM 121, 122, 123 15
CHM 211/215, 212/216, 213/217 18
GL 201, 251/252, 253/254, 255/256, 309, 486 or 342 or 399 (four cr.), 499
(Oceanography, four cr.) 30
PHY 107/117, 240/200, 242/202, 244/204, 260, 315, 420, 446 34

Required Supporting Courses 18

GEO 330 or 331
MTH 229, 230
STT 264

Phase One Professional Education Courses 15

ED 221, 223, 301, 303; EDS 333

Total 206

Mathematics and Statistics

Professors Arasu, Dombrowski, Evans, Fricke (Emeritus), Khamis, Mann, Mazumdar (Emeritus), McKee, Miller, Park (Emeritus), Pedersen, Perkel (Chair), Ratanapakhi, Rutter, Seoh, Voss

Associate Professors Farrell, Haber (Emeritus), Ho, Hou, C. Huang, Kaplan, Kinard, Loi, Mancini (Emeritus), Mathews, Metke (Emeritus), Mercer, Silaty, Svochohny, Tarpey, Tian, Turyn, Vance

Assistant Professors Ceco (WSU-Lake Campus), Craighead, Q. Huang, Howley (WSU-Lake Campus), Rife (WSU-Lake Campus), Wang

Lecturers Douglas, Lester, Otto, Sisson

Instructors Brackenridge, Dahl, Diesslin, Hardman, Tanner

The Department of Mathematics and Statistics offers several programs leading to a bachelor's degree in mathematics, as well as minor programs in mathematics and in statistics. Master of Science programs are available as well.

Major Programs

The Bachelor of Science program offers five concentrations: pure mathematics, applied mathematics, computing, statistics, and mathematics education. These five programs are adaptable to many postgraduation goals, ranging from various scientific or professional careers to graduate school. The Bachelor of Arts program provides a broad background in mathematics with a liberal arts orientation.

The Department of Mathematics and Statistics participates in the dual major program, leading to either the B.A. or the B.S. degree. For example, dual majors are available with computer science, engineering, and physics.

A cooperative education program is available that gives students the opportunity to work full time or part time in a career-related experience. Interested students should contact Career Services for more information.

Students must complete one of the major programs described below. Each program includes General Education requirements, departmental requirements, related course requirements, and general electives. The departmental component consists of required courses and electives in mathematics and statistics. Students must achieve at least a 2.0 GPA in the courses numbered 300 or higher used to satisfy this component. The general electives may be taken outside the Department of Mathematics and Statistics.
Each mathematics major is assigned an advisor from the department faculty. As early as possible in their college career, students should consult with their advisor on the important choice of a concentration. Likewise, students should confer with their advisor to discuss which courses to take and when to take them. Advising materials are available in the department office to help mathematics majors in these choices. However, there is no substitute for regular, in-person consultation with the faculty advisor. Moreover, the advisor must approve all courses intended to satisfy program requirements.

Mathematics and Statistics
Degree Requirements—
Mathematics/Pure Mathematics Concentration

Bachelor of Science Degree

General Education Requirements 42

Required Substitutions:
MTH 229, 230
PHY 240/200, 242/202, 244/204

Departmental Requirements 73

Required Courses

Recommended Course
MTH 332

Elective Courses

STT 360, 361, 461, 462

Related Course Requirements 24

PHY 240/200, 242/202, 244/204
CS 141 and either CS 142 or 240, or equivalent

Electives 44

Foreign language study recommended

Total 183

Degree Requirements—
Mathematics/Statistics Concentration

Bachelor of Science Degree

General Education Requirements 42

Required Substitutions:
MTH 229, 230

In area four, physics is recommended for the natural sciences requirement. If physics is chosen, then PHY 240/200, 242/202, 244/204 is a required substitution.

Departmental Requirements 68

MTH 229, 230, 231, 232, 233, 255, 257, 280, 316, 317 or 381, 355, 492

STT 360, 361

MTH 431 or 451

Two courses selected from MTH 381, 407, 410, 419, 456, 457, 458

One additional course selected from MTH 306, 381, 407, 410, 419, 431, 432, 451, 452, 456, 457, 458

Related Course Requirements 40–44

CS 240, 241, 242, 400
PHY 240/200, 242/202, 244/204 (if physics is chosen for General Education natural science)

At least three from:
CEG 320, 433, 434; CS 405, 466, 470, 480, 576
MTH 476, 477

Electives 29–33

Total 183

Degree Requirements—
Mathematics/Computing Concentration

Bachelor of Science Degree

General Education Requirements 42

Required Substitutions:
MTH 229, 230

In area four, if physics is chosen for the natural sciences requirement, then PHY 240/200, 242/202, 244/204 is a required substitution.

Departmental Requirements 71

Required Courses
MTH 229, 230, 231, 232, 233, 255, 280, 355

STT 360, 361, 461, 462, 466, 467, 492

Elective Courses
STT courses numbered above 367


CS 470

Electives selected to complete the departmental requirements must include at least two 400-level courses in the department, at least one of which must be a statistics course.

Recommended Electives
STT courses numbered above 367
MTH 431, 432
Related Course Requirements

CS 141 and either CS 142 or 240, or equivalent
PHY 240/200, 242/202, 244/204 (if physics is selected for General Education natural science)
At least 16 hours, chosen with the approval of a statistics faculty advisor, in any area in which statistical techniques can be applied.

Electives

Total

Degree Requirements—Mathematics/ Mathematics Education Concentration

Bachelor of Science Degree

General Education Requirements

Required Substitutions:
MTH 229, 230
PHY 240/200, 242/202, 244/204

Departmental Requirements

Required Courses
At least four courses chosen from:
MTH 306, 316, 317, 332, 333
STT 360, 361
Two courses chosen from:
MTH 407, 419, 456, 458, 480, 481, 482
Two additional 400-level elective courses

Elective Courses
Those listed above plus:
MTH 433, 451, 452, 457
STT 461, 462

Related Course Requirements

PHY 240/200, 242/202, 244/204
Either PHY 371, 372 or ME 212, 213
CS 141 and either CS 142 or 240, or equivalent
At least 12 hours of advanced technical electives, which must be approved by the department.

Electives

Total

Degree Requirements—Mathematics

Bachelor of Arts Degree

General Education Requirements

Required Substitutions:
MTH 229, 230

Departmental Requirements

Required Courses
STT 360, 361
MTH 432 or 452

Total

183
### Honors Program

Mathematics majors who have demonstrated superior ability in upper-level mathematics and statistics courses may pursue an honors program with the approval of the department. Further information is available from the departmental office.

### Dual Major

Special programs of study are available for students interested in a dual major in mathematics and either computer science, engineering, or physics. Requirements can be obtained in the Department of Mathematics and Statistics office.

Dual major programs may be arranged for students with other interdisciplinary interests. Basic requirements follow and must be integrated with a corresponding program from another participating department. **All programs require a minimum of 183 credit hours.**

### Dual Major Degree Requirements—Mathematics

#### Bachelor of Science Degree

**General Education Requirements**

- Required Substitutions: MTH 229, 230
- In area four, if physics is chosen for the natural sciences requirement, then PHY 240/200, 242/202, 244/204 is a required substitution.

**Departmental Requirements**

- Elective Courses
  - STT 401, 461, 462, 466, 467

- Related Course Requirements
  - CS 141 and either CS 142 or CS 240, or equivalent.

- Twenty-seven hours (at least eight hours in one department) in departments belonging to neither the College of Science and Mathematics nor the College of Engineering and Computer Science; one additional course within the College of Science and Mathematics or the College of Engineering and Computer Science, but outside the Department of Mathematics and Statistics. These courses are in addition to those needed to fulfill General Education requirements.

- Electives
  - Foreign language study is recommended

- **Total** 183

### Minor Programs

Students majoring in another department may earn a minor in mathematics or a minor in statistics. Either minor can serve as an attractive credential for employment or improved preparation for graduate study. Each minor requires a minimum of 30 credit hours of approved courses; specific requirements follow.

#### Minor Requirements—Mathematics

**Departmental Requirements**

- **Required Courses**
  - MTH 229, 230, 231, 232, 255, 355
  - At least two of the following:
    - MTH 431, 432, 451, 452, 457, 458
    - STT 461, 462

- **Elective Courses**
  - (maximum of two at the 200 level)
    - STT 360 or 363, 361, 461, 462, 466, 467

- **Related Course Requirements**
  - CS 141 and either CS 142 or CS 240, or equivalent
Only one of MTH 253 and 255 and only one of STT 360 and 363 can count toward the minor. Special rules apply for students with credit for the five-credit MTH 355 course, last taught spring 1992. (See the Department of Mathematics and Statistics or your advisor for details.) Courses cross-listed with the student’s major department cannot be included in the minor. A GPA of at least 2.0 must be attained in all minor courses. The minor must include at least three 300- or 400-level courses; a GPA of at least 2.0 must be earned in all minor courses at this level.

Minor Requirements—Statistics

| Departmental Requirements | 30 |

Required Courses
MTH 229, 230, and MTH 253 or 255
STT 360, 361

Elective Courses
STT courses numbered above 367

Elective courses must be approved in advance by the Department of Mathematics and Statistics. A GPA of at least 2.0 must be attained in all minor courses, and a GPA of at least 2.0 must be earned in all minor courses at the 300 or 400 level.

Physics

Professors: Bambakis (chair), Martin (Emeritus)
Associate Professors: Clark, Farlow, Foy, Hensky (Emeritus), Listerman (Emeritus), Skinner, Wood (Emeritus)
Assistant Professor: Basista, Kozlowski

The Department of Physics offers programs leading either to a Bachelor of Science degree or a Bachelor of Arts degree in physics. The Department of Physics and the Department of Electrical Systems Engineering jointly offer a program leading to the Bachelor of Science in Engineering degree in engineering physics; see the Electrical Systems Engineering section of the College of Engineering and Computer Science chapter for more information on this program. Students in secondary education may earn the Bachelor of Arts degree in physics and enter the Professional Year Experience program of the College of Education and Human Services for licensure in physical sciences (life sciences/physics or earth sciences/physics).

Minimum requirements for the Bachelor of Science and Bachelor of Arts degrees in physics include successfully completing the required courses, with a GPA of at least 2.0 for all physics courses, as well as completing university and college degree requirements.

In addition to the required courses, the department requires, for the Bachelor of Science degree, that every physics major take PHY 494 or 499. The physics major who plans to pursue graduate study is also strongly urged to take the following courses: PHY 480, 481, 482; one to two years of a foreign language, either French, German, or Russian; and additional mathematics courses.

Degree Requirements—Physics

Bachelor of Science Degree

General Education Requirements

Areas one through four (not counting substitutions listed below)

Required Substitutions, which are also major program requirements:

| MTH 229, 230 |
| PHY 240/200, 242/202, 244/204 |

Departmental Requirements

| PHY 240/200, 242/202, 244/204: or equivalent |
| PHY 260, 371, 372 |
| PHY 315, 316, 322 |
| PHY 420, 450, 451, 452, 460, 461, 462 |
| PHY 494 |

Related Course Requirements

| MTH 229, 230, 231, 232, 233, 253 |
| MTH 332, 333 |
| CHM 121, 122, 123, or 191, 192, 193 (or 361) |
| EGR 153 or equivalent |

Electives

| 30 |

Total

192

Since the order in which courses are taken is important, students should closely follow the suggested programs for the required courses.

Bachelor of Arts Degree

General Education Requirements

Areas one through four (not counting substitutions listed below)

Required Substitutions, which are also major program requirements:

| PHY 240/200, 242/202, 244/204 |
| MTH 229, 230 |

Departmental Requirements

| PHY 240/200, 242/202, 244/204, or equivalent |
| PHY 260, 315, 371, 450 |
| PHY 316, 322, 372, 420, 451 |

(for licensure in physical sciences, PHY 446 is a required substitution for one of these courses)
Degree Requirements—
Physics/Computing Option

Bachelor of Science Degree

The Department of Physics offers a program leading to a Bachelor of Science degree in physics with a computing option. This option is designed for students who plan a career in any of the many areas of theoretical or experimental physics that involve extensive use of digital computers.

Students following the physics program with the computing option must meet the requirements of the basic physics degree program. In addition, the following courses are required.

Computing Option Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 240, 241, 242</td>
<td>12</td>
</tr>
<tr>
<td>MTH 257</td>
<td>3</td>
</tr>
<tr>
<td>CS 400</td>
<td>4</td>
</tr>
<tr>
<td>CS 316, 317</td>
<td>8</td>
</tr>
</tbody>
</table>

Students who wish to learn about microprocessors may wish to take further courses in computer engineering, such as CEG 260, 320, and 360. For these students, CEG 430 and 431 may be taken in place of CS 316 and 317.

Degree Requirements—
Physics/Biology Option

Bachelor of Science Degree

The Department of Physics, in cooperation with the Department of Biological Sciences, offers a program leading to a Bachelor of Science in Physics with a biology option. This option is designed for students who plan a career in physics in a biology-related setting or who want to pursue graduate study in biophysics or medical physics.

Students following the physics program with the biology option must meet the requirements of the basic physics degree program. In addition, the following courses are required.

Biology Option Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 112, 114, 115</td>
<td>12</td>
</tr>
<tr>
<td>BIO 492 (biophysics emphasis)</td>
<td>2</td>
</tr>
<tr>
<td>CHM 211, 212</td>
<td>12</td>
</tr>
</tbody>
</table>

Physics Education

Students who wish to teach physical sciences in Ohio public high schools can pursue the B.A. degree in physics. Upon completion of this undergraduate degree program in the College of Science and Mathematics, students then need to complete the Professional Educators Program (PEP) through
Wright State’s College of Education and Human Services. Graduates of the B.A. in physics and the Professional Educators Program are then eligible to seek licensure from the Ohio Department of Education in Physical Sciences. Licensure in Life Sciences/Physics, or Earth Sciences/Physics, can also be sought upon completion of programs based on the B.A. in Physics and PEP.

Degree Requirements—Physical Sciences Education

Bachelor of Arts Degree (Physical Sciences)

The Adolescence to Young Adult Physical Sciences Licensure Program is based on an undergraduate Bachelor of Arts degree in physics.

General Education Requirements 42

Required Substitutions:

PHY 240/200, 242/202, 244/204
MTH 229, 230

Departmental Requirements 48-49

PHY 240/200, 242/202, 244/204
PHY 107/117, 315, 317, 446, 450

Physics Electives (15 cr. chosen from the following):

PHY 316, 322, 372, 420, 451 12-13

Related Course Requirements 117

BIO 112, 114 8
CHM 121, 122, 123 15
CHM 211/215, 212/216, 213/217, 312/314, 451 28.5
GL 251/252, 253/254, 255/256 13.5
MTH 229, 230, 231, 232, 233 25

Electives outside the Colleges of Science and Mathematics and Engineering and Computer Science (must include ED 221, 223, 301, 303, EDS 333) 27

Total 207

Degree Requirements—Earth Sciences/Physics Education

Bachelor of Arts Degree

The Adolescence to Young Adult Earth Sciences/Physics Licensure Program is based on an undergraduate Bachelor of Arts degree in physics.

General Education Requirements 42

Required Substitutions:

PHY 240/200, 242/202, 244/204
MTH 229, 230

Departmental Requirements 48-49

PHY 240/200, 242/202, 244/204
PHY 107/117, 260, 315, 371, 446, 450 36

Physics Electives

Select from the following:

PHY 316, 322, 372, 420, 451 12-13

Related Course Requirements 114.5

BIO 112 4
CHM 121, 122, 123 15
GL 201 or 304, 251/252, 253/254, 255/256, 309, 311 or 420, 401, 485, 486, or 342 or 399 (four cr.), 499 (Oceanography) 43.5
MTH 229, 230, 231, 232, 233 25

Electives outside the Colleges of Science and Mathematics and Engineering and Computer Science (must include GEO 330 or 331, and ED 221, 223, 301, 303, EDS 333) 27

Total 204.5-205.5

Degree Requirements—Life Sciences/Physics Education

Bachelor of Arts Degree

The Adolescence to Young Adult Life Sciences/Physics Licensure Program is based on an undergraduate Bachelor of Arts degree in physics.

General Education Requirements 42

Required Substitutions:

PHY 240/200, 242/202, 244/204
MTH 229, 230

Departmental Requirements 48-49

PHY 240/200, 242/202, 244/204
PHY 107/117, 260, 315, 371, 446, 450

Physics Electives

Select from the following:

PHY 316, 322, 372, 420, 451 12-13

Related Course Requirements 114.5

BIO 112, 114, 115, 210, 211, 212, 252, 278, 279, 426, 492 43
CHM 121, 122, 123 15
GL 251/252 4.5
MTH 229, 230, 231, 232, 233 25

Electives outside the Colleges of Science and Mathematics and Engineering and Computer Science (must include ED 221, 223, 301, 303, EDS 333) 27

Total 204.5-205.5
Physics Honors Program

The Department of Physics has an Honors Program designed to provide superior students with a program that offers greater creativity and intellectual challenge. Students who wish to participate in this program must apply to the department during the spring quarter before they plan to enter the Honors Program. Interested students should have at least a 3.0 GPA overall and at least a 3.0 in physics courses numbered 300 and above. To graduate with honors in physics, students are required to complete PHY 480, 481, 482, and nine hours of honors research (499) with grades of “B” or better.

Dual Major Program in Physics and Mathematics

The dual major in physics and mathematics is designed for students majoring in physics who wish to gain a strong background in mathematics. This can be particularly valuable for those planning graduate study.

Since the physics major program for the Bachelor of Science degree requires 34 hours of mathematics, and the mathematics component of the major requires 45 hours, 11 additional hours of mathematics need to be taken. To earn a dual major, students must take the following mathematics courses:

1. MTH 229, 230, 231, 232, 233, 332, 333
2. MTH 255 and 355 (Matrix Algebra) must be taken in place of MTH 253. If MTH 253 has already been taken, the student must still take MTH 355.
3. Eight hours of electives must be selected from restricted lists of courses. For a student in this program, the natural choice would be to select three courses from MTH 431, 432, 433, 480, 481, 482.

Total
45

In addition, students must:
4. take CS 141 and CS 142 or EGR 153 or equivalent (total eight hours); and
5. complete the other nonmathematical requirements of the physics major.

Minor Programs

Students majoring in another department may earn a minor in physics. A minor can help prepare students for an interdisciplinary graduate program or serve as a supportive credential for employment. The minor requires a minimum of 35 credit hours as specified in the following:

Minor Requirements—Physics

Departmental Requirements 35

Required Courses
PHY 240/200, 242/202, 244/204
(or PHY 111/101, 112/102, 113/103, 240, 242)
PHY 260, 315, 371

Elective Courses
(Nine hours chosen from the following courses as approved in advance by the Department of Physics)
PHY 316, 322, 372, 400, 401, 420, 432, 450, 451, 452, 460, 461, 462, 494
(maximum three hours)

Physiology/Biophysics

Professors Alvarez-Leefmans, Lauf (chair), Lu, Putnam
Associate Professors: Corbett, Dean, Goldfinger, Henderson, Nussbaum, White
Assistant Professors: Gomez-Cambronero, Halm, Mechlin, Brown

The Department of Physiology and Biophysics provides a curriculum for students who plan to enter into medicine, nursing, or other health-related professions and participate in the Biomedical Sciences Ph.D. program. Although the department does not offer an undergraduate degree in physiology and biophysics, students may take physiology and biophysics as part of the Bachelor of Science degree in biological sciences or other science disciplines.

Psychology

Professors: Flach, Hennessy, H. Klein, Kurdek, Nagy, Shebilske (chair)
Associate Professors: Bennett, Campbell, Colle, Edwards, Gilkey, Gill (WSU–Lake Campus), Kruger, Tsang, Watamaniuk, Weber
Assistant Professors: Shalin, Steele-Johnson, Ivkovich, Miller, Schneider

The Department of Psychology offers programs leading to the Bachelor of Science and the Bachelor of Arts degrees. Both degree programs are designed to give students a broad introduction to contemporary psychology. The Bachelor of Arts curriculum offers the greatest flexibility in electives.
within and outside of psychology. The Bachelor of Science curriculum is recommended for students planning careers in academic, research, or professional fields. Both degree programs offer enough flexibility so that students can supplement their individual program with additional courses both inside and outside psychology; allowing students to tailor their degree to meet their individual goals. Students considering graduate school should consult with their departmental advisors early in their academic career.

Students must have earned 30 hours and have a cumulative GPA of 2.25 to transfer into the Department of Psychology. Once students have been accepted by the department, they are invited to attend a department orientation. This orientation provides students with critical information about degree completion, graduate school, and job opportunities among other information. After attending orientation, students should work with their assigned advisor. Because of the breadth of psychology, a variety of different educational options are available. Students can select courses that best fit their area of interest. Advising materials for students interested in cognitive science, human factors, human services or clinical psychology, and industrial/organizational psychology can be obtained from the department. The department offers a concentration in human factors. Students must earn at least 65 credit hours in departmental requirement courses for a Bachelor of Arts, and at least 73 credit hours for a Bachelor of Science degree.

Degree Requirements—Psychology/Academic Concentration

Degree requirements for all the psychology programs are subject to change. Check with the department office for the current degree requirements.

Bachelor of Arts Degree

The B.A. curriculum is designed to provide you with opportunities to achieve five outcomes. Check with the department office for the current degree requirements.

**Outcome 1:**
You will be familiar with current theory and research in diverse areas of psychology.

**Outcome 2:**
You will have fundamental research design and mathematical/statistical skills needed to appreciate psychological science.

**Outcome 3:**
You will have advanced knowledge in self-selected areas of psychology.

**Outcome 4:**
You will communicate effectively in both written and oral forms.

Each of the requirements listed below relates specifically to one of these outcomes.

---

**General Education Requirements**

**Required Substitutions, which are also major program requirements:**

STT 264, 265

**Departmental Requirements (minimum)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 105, 110</td>
<td>8</td>
</tr>
<tr>
<td>PSY 300</td>
<td>5</td>
</tr>
<tr>
<td>PSY 311, 331, 341, 351</td>
<td>16</td>
</tr>
<tr>
<td>PSY 321, 361, 371, 391</td>
<td>20</td>
</tr>
<tr>
<td>Four 400-level electives in psychology (excluding 432, 489, 490, 498, 499)</td>
<td>16</td>
</tr>
<tr>
<td>Minimum electives in psychology</td>
<td>20</td>
</tr>
<tr>
<td>Two of the courses required for the major must be writing intensive.</td>
<td></td>
</tr>
</tbody>
</table>

**Related Course Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STT 264, 265</td>
<td>8</td>
</tr>
<tr>
<td>One additional course in science and mathematics or engineering and computer science outside psychology</td>
<td>3</td>
</tr>
<tr>
<td>Electives outside of science and mathematics and engineering and computer science</td>
<td>27</td>
</tr>
<tr>
<td>Electives</td>
<td>26</td>
</tr>
</tbody>
</table>

**Total (minimum requirements)**

183

---

**Degree Requirements—Psychology**

**Bachelor of Science Degree**

The B.S. curriculum is designed to provide you with opportunities to achieve five outcomes. Relative to the B.A. curriculum, the B.S. curriculum has a stronger focus on research methodology.

**Outcome 1:**
You will be familiar with current theory and research in diverse areas of psychology.

**Outcome 2:**
You will have advanced research design, mathematical/statistical, and computing skills needed to appreciate psychological science.

**Outcome 3:**
You will have advanced knowledge in self-selected areas of psychology.

**Outcome 4:**
You will conduct research in self-selected areas of interest.

**Outcome 5:**
You will communicate effectively in both written and oral forms.

Each of the requirements listed below relates specifically to one of these outcomes.

**General Education Requirements**

**Required Substitutions, which are also major program requirements:**

STT 264, 265
### Departmental Requirements (minimum)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 105, 110</td>
<td>8</td>
</tr>
<tr>
<td>PSY 300 and 400</td>
<td>9</td>
</tr>
<tr>
<td>Five of the following (at least two from each group):</td>
<td>20</td>
</tr>
<tr>
<td>PSY 311, 331, 341, 351</td>
<td></td>
</tr>
<tr>
<td>PSY 321, 361, 371, 391</td>
<td></td>
</tr>
<tr>
<td>Two courses from the following:</td>
<td>8</td>
</tr>
<tr>
<td>PSY 323, 333, 343, 353, 363, 373, 393</td>
<td></td>
</tr>
<tr>
<td>Four 400-level electives in psychology (excluding 432, 489, 490, 498, 499)</td>
<td>16</td>
</tr>
<tr>
<td>Minimum electives in psychology</td>
<td>12</td>
</tr>
<tr>
<td>Two of the courses required for the major must be writing intensive.</td>
<td></td>
</tr>
</tbody>
</table>

### Related Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 128 or 129</td>
<td>3</td>
</tr>
<tr>
<td>STT 264, 265</td>
<td>8</td>
</tr>
<tr>
<td>CS 141</td>
<td>4</td>
</tr>
<tr>
<td>CS 142 or PSY 401</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>37</td>
</tr>
</tbody>
</table>

### Total (minimum requirements)

183

### Human Factors Psychology Concentration

Human factors is a field that was pioneered by psychologists, and the overwhelming majority of people in the field are psychologists. Graduates of the human factors concentration typically find employment in industry or government. They are also well prepared for graduate study in engineering psychology, experimental psychology, or human factors.

### Degree Requirements—Human Factors Concentration/Experimental Psychology

#### General Education Requirements

54

#### Required Substitutions, which are also major program requirements:

- STT 264, 265
- PHY 111/101, 112/102, and 113/103,
- or PHY 240/200, 242/202, 244/204

#### Departmental Requirements (minimum)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 105, 110</td>
<td>8</td>
</tr>
<tr>
<td>PSY 300, 400</td>
<td>9</td>
</tr>
<tr>
<td>PSY 321, 331, 351, 371, and 391</td>
<td>20</td>
</tr>
<tr>
<td>PSY 323 and 373</td>
<td>8</td>
</tr>
<tr>
<td>PSY 401, 421, 465, and 471</td>
<td>16</td>
</tr>
<tr>
<td>PSY 306</td>
<td>4</td>
</tr>
<tr>
<td>PSY 304</td>
<td>4</td>
</tr>
<tr>
<td>PSY 432, 498, or 499</td>
<td>4</td>
</tr>
</tbody>
</table>

Two of the courses required for the major must be writing intensive.

#### Related Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 111, 112, 113, or 240, 242, 244</td>
<td>13.5</td>
</tr>
<tr>
<td>STT 264, 265</td>
<td>8</td>
</tr>
<tr>
<td>MTH 229, 230</td>
<td>10</td>
</tr>
<tr>
<td>CS 141, 142</td>
<td>8</td>
</tr>
<tr>
<td>MTH 253</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Electives

13.5

#### Total (minimum requirements)

183

### Psychology Honors Program

Students interested in being admitted to the psychology honors program should apply before the beginning of their senior year. Students usually apply at the end of the sophomore year. After acceptance, students enroll in one departmental honors seminar each academic year. Part-time students must complete one honors seminar prior to graduation. All students must complete an honors thesis, for which academic credit is granted.

### Minor Program

The psychology minor is available for students who would like to gain a better understanding of psychological processes. Students in a wide variety of majors may benefit by supplementing their knowledge and skill with a stronger background in psychology. The minor is flexible and allows students to select subsets of courses that are appropriate for particular majors. Students in biology, business, communication, computer science, education, nursing, and sociology may find that the psychology minor enhances their educational goals. The minor may be fulfilled by completing the following requirements.

#### Minor Requirements—Psychology

#### Departmental Requirements

36

#### Required courses:

- PSY 105, 110
- Three of the following courses:
  - PSY 311, 321, 331, 341, 351, 361, 371, 391

#### Elective Courses:

Electives in Psychology (200-400 level)

16

A GPA of at least 2.0 must be attained in all minor courses. Courses cross-listed with the student's major department cannot be included in the minor.
Science and Mathematics
Education

Teacher Education—Content Preparation

The following science and mathematics baccalaureate programs are offered as
preprofessional programs in preparation for the graduate level Adolescence to Young Adult
licensure programs:

- Chemistry (p. 175)
- Earth and Space Sciences (p. 178)
- Earth Sciences/Chemistry (p. 179)
- Earth Sciences/Physics (p. 186)
- Integrated Mathematics (p. 182)
- Integrated Sciences (p. 180)
- Life Sciences (p. 172–173)
- Life Sciences/Chemistry (p. 172)
- Life Sciences/Earth Sciences (p. 179)
- Life Sciences/Physics (p. 186)
- Physical Sciences (p. 186)
LAKE CAMPUS
Dean, Lake Campus TRA
Associate Dean, Lake Campus Gregory F. Schumm
Faculty

Professors Kich, Knapke (Emeritus), Stickman (Emeritus)
Associate Professors Buell (Emeritus), Carlson, Cavanaugh, Cico, Custenborder (Emerita), Fulk, Gill, Hiskey, Kich, Kremer, McDermott, Molitierno, Norris (Emeritus), Schumm, Schwartz, Steinberg, Strickland
Assistant Professors Campbell, Hagen (Emerita), Hawley, Rife (Emeritus), Snyder (Emerita), Wetter (Emeritus), Young

The Lake Campus

The Wright State University–Lake Campus is located on the north shore of Grand Lake St. Marys between Celina and St. Marys. The Lake Campus is easily accessible to the residents of Auglaize, Mercer, Van Wert, Shelby, Allen, and Darke counties and offers associate and prebaccalaureate degree programs, with day, evening, and weekend classes. The Lake Campus also offers a limited number of upper division and graduate courses, including a Bachelor of Education in Early Childhood Education, a Bachelor of Science in Organizational Leadership, a Bachelor of Science in Nursing completion program, and Masters degrees in Education, Educational Leadership, and Business Administration. The Lake Campus also offers a variety of preprofessional and certificate programs, and participates in the Ohio Transfer Module.

The Wright State University–Lake Campus was created in 1962 and became a regional branch campus of Wright State University in June 1969. In 1972, the college moved to its present location on 173 acres on the north shore of Grand Lake St. Marys between Celina and St. Marys.

The administrative wing of Dwyer Hall houses the Admissions/Registrar’s Office; Financial Aid/Bursar’s Office; counseling, academic advising, testing, and career placement offices; and the offices of the dean and associate dean. A receptionist is available during business hours to answer questions, set up appointments with an academic advisor, and give students descriptive material.

Quarterly class schedules for classes held at the Lake Campus are available by contacting the Lake Campus, 1-800-237-1477 or (419) 586-0300.

Services

Specific services are available at the Lake Campus in the following areas.

Admission, Registration, and Fees

The staff at the Lake Campus can help students complete the application for admission. Lake Campus staff can also accept registrations for any Wright State University class and process the collection of student fees.

Financial Aid

Any individual interested in obtaining a college education should not fail to apply because of financial limitations. There are many forms of financial assistance available to deserving students whose personal and family financial resources are insufficient to meet their educational expenses. For complete information, be sure to contact the financial aid officer at the Lake Campus. Counselors are available to discuss your situation and the various possibilities for financial assistance.

Scholarships

The Lake Campus provides numerous scholarships for both high school seniors and continuing students. The scholarships are awarded on both academic and need-based criteria. Students apply by filling out a Lake Campus Scholarship application. Awards range from a $200 book scholarship to full tuition. Inquire at the Lake Campus Financial Aid Office.

Counseling and Testing

Professional counseling is provided free of charge to Lake Campus students. This service includes evaluation of personal interests, abilities, needs, and values; placement and aptitude testing; help in selecting careers; counseling for personal problems; and aid in developing desirable personal traits such as getting along with others, assertiveness, and self-discipline. Services are by appointment. Although counseling and testing are available to everyone, freshmen students are especially urged to use these benefits so they can begin planning early for their career development.

Academic Advising

Academic advising is provided to all Lake Campus students. Through this service, students can get advice in planning the schedule of courses they will take during their college career. Students must consider General Education requirements, classes in specialized fields, courses that must be taken in sequence, and electives. The academic advisor recommends that students plan their quarterly
schedules according to their chosen career objective so they will have the necessary credit hours in the appropriate classes to obtain their degrees. Incoming freshmen students must meet with an academic advisor.

Tutoring

The Lake Campus makes every effort to help students who experience academic difficulty. In addition to counseling to improve study skills, tutoring in English, reading, mathematics, and most other subject areas is provided.

Academic and Instructional Services

The Office of Academic and Instructional Services maintains computer software packages and audiovisual materials that allow students to improve basic skills and give advanced students a means to progress more rapidly in certain subjects or skills. The center also provides services such as tutoring and independent or individualized study in conjunction with another department or through the AIS itself. These services are available to any Lake Campus student. Such services may include test proctoring, counseling, tutoring, and note taking. Students with disabilities are encouraged to contact the AIS for supplemental services.

Job Placement

The Lake Campus assists graduates in locating suitable employment. Employers frequently contact the Lake Campus for their hiring needs, and a job board is maintained.

Library

A vital part of the Lake Campus is the library. The Lake Campus library is a full-service facility offering full-text versions of over 2800 journals, 100 databases, and access to 30 million books via OhioLINK. The library has over 30,000 volumes on hand and can obtain interlibrary loans from over 4,000 libraries in the United States.

Veterans' Services

The staff in the Office of the Registrar at the Lake Campus will help qualifying individuals prepare the necessary forms, and will follow through with the regional Veterans Administration office to ensure that students receive their VA benefits.

Bookstore

The Cottage Bookstore is operated by Wright State for the convenience of Lake Campus students, providing textbooks, academic supplies, WSU apparel, and gifts.

Child Care

A child care partnership has been formed with the Auglaize/Mercer YMCA, providing convenient, on-campus child care services to students who are enrolled in one or more classes at the Lake Campus.

Student Organizations and Activities

The student body plays an active role in organizing activities and participating in campus government. Any Lake Campus student is eligible to take an active part in the planning of campus activities and serving as a representative to Lake Campus Faculty Government. The following are some of the organizations and activities that the student body helps support:

The College Community Arts Council is supported by the Lake Campus, local corporate gifts, grants from the state of Ohio, and ticket sales. Performances include not only drama and music of all types, but also ballet and residencies specifically for area public schools. Lake Campus students can attend all Arts Council functions at no cost.

Athletic Programs include men's and women's basketball, and beginning fall 2002, women's volleyball and men's golf.

Society of Manufacturing Engineers (SME) is an international professional society that provides many services such as programs, publications, workshops, conferences, and expositions. Activities and events are planned each year by the SME Student Chapter at the Lake Campus. These events and activities are free to SME members. Scholarships are provided annually to SME members by the chapter.

The Business Professionals of America is the national organization for students preparing for work in the business world. Business Professionals of America is for students at Wright State University—Lake Campus enrolled in business office education programs who are interested in developing personal, leadership, and office skills. Lake Campus students have won numerous awards at national BPA competitions.

Lake Campus Future Educators was organized to provide services and support to all students interested in a career in education. Regular meetings provide students with opportunities for a variety of preprofessional activities, including portfolio assistance, practice interviews, and other programs. The group also publishes a quarterly newsletter.
Adults Supporting Adults Project (ASAP) seeks to address the needs of the nontraditional student. It is designed to help adult students with the study skills and strategies needed to be successful college students. ASAP meetings are informal and allow adult students to share with fellow students their ideas, concerns and questions about various aspects of academic life.

Health and Wellness Committee is a collaboration between the Lake Campus, area hospitals, the local YMCA, and other community organizations, with a focus on promoting health awareness among students enrolled at WSU-LC and in the community. A number of programs designed to enhance the quality of life are offered monthly, with an emphasis on helping students increase their self-awareness and make positive changes in their current approach to their health, school and life.

Graduation Requirements for Associate’s Degree

To graduate with an associate’s degree from Wright State University—Lake Campus, all students must fulfill the following requirements:

Credit Hours—A minimum of 90 credit hours must be earned in approved courses for an associate’s degree.

Grade Point Average—At least a minimum cumulative grade point average of 2.0 must be earned for courses taken at Wright State University.

General Education—The university’s general education requirements must be completed.

Residence Regulations—A minimum of 20 credit hours in the student’s major concentration must be earned at Wright State University for completion of an associate’s degree.

Students must also fulfill all program requirements set by departments, colleges, and schools, some of which exceed these university minimums; see individual program requirements for details.

Responsibility for registering in appropriate classes, scheduling, and fulfilling all university and program requirements for graduation rests with the student.

Students who are continuously enrolled or eligible to enroll continuously (students are eligible to enroll continuously if they are enrolled during any part of the calendar year) may elect to meet either the university requirements that were in effect when they entered Wright State or the university requirements that came into effect while they were continuously enrolled. Students who were not enrolled continuously must meet the university requirements in effect when they are readmitted to the university.

Students must meet the college or school requirements in effect when they are admitted to the college or school, and they must meet the program requirements in effect when they are admitted to a specific program or major. Students who are not enrolled continuously may be required to meet the college, school, or program requirements in effect when they are readmitted to a program. In addition, students who have not completed their program in seven years may have their college, school, or program requirements revised.

Bachelor’s Degree Requirements are included in the main campus section of the catalog.

Writing Across the Curriculum (WAC)

Baccalaureate degree students must complete a total of eight WAC courses, six in General Education (GE) and two in the major. Lake Campus students should meet with their advisor to determine the effect of this requirement on their individual programs.

Academic Programs

The academic programs at the Lake Campus consist of Associate of Arts and Associate of Science degrees and Associate of Applied Business, Associate of Applied Science, and Associate of Technical Study degrees; Bachelor in Early Childhood Education, Bachelor of Science in Organizational Leadership, and a Bachelor of Science in Nursing completion program; Masters in Business Administration and Masters in Education. Programs leading to the Associate of Arts or the Associate of Science degrees serve as prebaccalaureate programs to many of the degree programs offered at the Dayton campus. Students can complete up to two years of coursework before moving on to the Dayton campus for completion of a bachelor’s degree or transferring to another four-year institution.

Brief descriptions of programs in both the academic and technical areas follow.
Bachelor of Science (B.S.)
Organizational Leadership

The Bachelor of Science in Organizational Leadership degree was developed as a degree completion program for students who possess an associate degree (or an equivalent number of credit hours) and are interested in pursuing leadership positions within the private, public and nonprofit sectors of the economy. This is a unique, multidisciplinary program that requires students to take courses from the Raj Soin College of Business, and the Colleges of Education and Human Services, and Liberal Arts. It provides students with both a broad academic and practical background to ready them for today's contemporary work environment. Students will be exposed to the theory and practice necessary for leading today's organizations, and be given the opportunity to develop skills in planning and controlling the human, physical, financial, and technical resources within organizations.

General Education 57
Associate Degree
Organizational Leadership Electives 70
Integrated Leadership Focus 19

Choose one:
ENG 330 or 333

Choose one:
CS 205 or 206 or 207

Choose one:
COM 101 or 102 or 141

Part of Core Sequence 8

Choose one:
PSY 304 or SOC 350

Choose one:
COM 325 or 340 or 343 or 443 or 453

Organizational Leadership
Concentration 48

Required prerequisites:
ACC 201
EC 201
TMK 201

Foundations (all required):
EDL 301, 302, 303, and 304

Fundamentals:
MGT 302 (required)

Early Childhood Education

B.S.Ed. degree Leading to Licensure

The Pre-K–3 licensure program prepares students to teach children three years of age through grade three. The Pre-K–3 license qualifies you for employment in day care, nursery school, Headstart, public and private preschools, and primary (K–3) elementary grades. Students will be required to work with children from birth through third grade in Phases 1, 2, and 3. The program offers courses in general education, professional education, and content curriculum.

Most Curriculum Content classes should be completed within the student's first two years. Some of the courses must be completed before ED or EDE classes may be taken. Admission to the College of Education and Human Services is required before Professional Education Courses may be taken. For admission to the College of Education, the student must have earned 45 credit hours, have a GPA of 2.5 or higher, and have a passing score on the math, writing and reading sections of the Praxis I test.

Early Childhood Education (Pre-K–3, Ages 0–8) Degree Requirements

General Education 46

Area One:
ENG 101 Process of Writing
102 Effective Written Discourse
MTH 143 Quantitative Reasoning

Area Two:
HST 101, 102, 103 The Western World
Great Books (Choose one):
ENG 204 Literature
PHL 204 Philosophy
REL 204 Bible and Western Culture
Fine and Performing Arts (Choose one):
ART 214 Visual Art
MUS 214 Music
TH 214 Theatre

Area Three:
Comparative Studies (CST) (Choose one):
220 Nonwestern Environments
230 Nonwestern World Views
240 Nonwestern Culture
250 Nonwestern Social Systems
Regional Studies (RST) (Choose One): 3
260 Asia
280 Latin America
270 Africa
290 Middle East

Area Four:
EC 200 Economic Life 3
PLS 200 Political Life 3
PSY 105 Psychology: Science of Behavior 4
SOC 200 Social Life 3

Curriculum Content 60
AED 431 The Arts and the Child 4
COM 103 Communications for Teachers 3
EDT 280 Classroom Applications of Computer-Based Technology 3
GEO 201, 202 or 203 Principles of Physical/Cultural/Economic Geography 3
HED 331 Health Education for Early and Middle Childhood 4
HPR 281 Physical Education for Early and Middle Childhood 4
HST 211 and 212 American Civilization 6
MTH 243 and 244 Fundamentals of Mathematics I and II 8
MUS 365 Methods and Materials for Teaching General Music 4
SM 145 Foundations in Scientific Literacy and Problem Solving 3
PHY 245* Concepts in Physics 4.5
CHM 245* Concepts in Chemistry 4.5
BIO 345* Concepts in Biology 4.5
GL 345* Concepts in Geology 4.5
*Meets General Education Science Requirements

Professional Education 86–88

Junior Year

Phase I—First Quarter
EDE 300 Schooling in a Culturally Diverse Society 3
EDE 301 Human Growth and Development: Pre-natal through Early Childhood 3
EDE 221 Practicum Experience I (Corequisites: EDE 300 and 301) 1
EDE 230 Introduction to Early Childhood Education 3
EDE 315 Young Children with Special Needs 3
EDE 223 Practicum Experience II (Corequisites: EDE 230 and 315) 1

Phase I—Second Quarter
EDE 231 Developmentally Appropriate Programming in Early Childhood: Infants and Toddlers 3
EDE 303 Social Development and Play in ECE 3
EDE 307 Language Development and Communication Disorders in ECE 3
EDE 225 Practicum Experience III (Corequisites: EDE 231, 303, and 307) 1
EDE 407 Instruction in Word Study: Phonics 5

Phase II—First Quarter
ED 316 Early Childhood Language Arts: Curriculum and Materials 3
ED 317 Early Childhood Reading: Curriculum and Materials 3
ED 417 Early Childhood Social Studies: Curriculum and Materials 3
EDE 321 Practicum Experience V (Corequisites: EDE 316, 317, and 417) 1
EDS 459 Communication and Consultation Skills for Special Educators 3
EDE 401 Family and Community in Early Childhood 3

Phase II—Second Quarter
ED 411 Early Childhood Mathematics: Philosophy, Curriculum and Materials 4
ED 311 Early Childhood Science: Philosophy, Curriculum and Materials 4
EDE 317 Meeting the Individual Needs of Young Children 3
EDE 323 Practicum Experience VI (Corequisites: EDE 311, 411 and EDE 317) 1
ED 427 French and Spanish Children’s Literature, Music, and Art 3

Phase III
EDE 419 Student Teaching in Early Childhood 10–12
EDE 440 The Professional Early Childhood Educator 3

Total 192–194

Final recommendation for licensure requires satisfactory completion of Praxis II examinations.

Middle Childhood Education

Pre-Professional Program Middle Childhood B.S.Ed. degree without licensure

Important Note: The B.S.Ed. in Middle Childhood does not lead to licensure. Students must complete a graduate level program and Praxis II tests in order to be eligible for a license in Middle Childhood.

The concentration areas outlined below are not automatically offered in toto at the Lake Campus each year, but some of the individual courses are. Also, all the courses of a concentration could be offered if a core group of students expressed that desire.

Phases I—III

Phase I—First Quarter
- EDE 464 Evaluation and Assessment in Early Childhood Education 3
- EDE 302 Positive Guidance and Discipline in ECE 3
- ED 227 Practicum IV (Corequisites: EDE 302 and 464) 1

Phase II—First Quarter
- ED 316 Early Childhood Language Arts: Curriculum and Materials 3
- ED 317 Early Childhood Reading: Curriculum and Materials 3
- ED 417 Early Childhood Social Studies: Curriculum and Materials 3
- EDE 321 Practicum Experience V (Corequisites: EDE 316, 317, and 417) 1
- EDS 459 Communication and Consultation Skills for Special Educators 3
- EDE 401 Family and Community in Early Childhood 3

Phase II—Second Quarter
- ED 411 Early Childhood Mathematics: Philosophy, Curriculum and Materials 4
- ED 311 Early Childhood Science: Philosophy, Curriculum and Materials 4
- EDE 317 Meeting the Individual Needs of Young Children 3
- EDE 323 Practicum Experience VI (Corequisites: EDE 311, 411 and EDE 317) 1
- ED 427 French and Spanish Children’s Literature, Music, and Art 3

Phase III
- EDE 419 Student Teaching in Early Childhood 10–12
- EDE 440 The Professional Early Childhood Educator 3

Total 192–194

Final recommendation for licensure requires satisfactory completion of Praxis II examinations.
Degree Requirements—Middle Childhood Education

Grades 4—8

General Education 46

Area One:
- ENG 101 Process of Writing, 102 Processes of Writing, Effective Written Discourse 8
- MTH 143 Quantitative Reasoning 4

Area Two:
- HST 101, 102, 103 The Western World 9
- Great Books (Choose one):
  - ENG 204 Literature 3
- Fine and Performing Arts (Choose one):
  - ART 214 Visual Art 3
  - MUS 214 Music 3
  - TH 214 Theatre 3

Area Three:
- Comparative Studies 3
- CST 230 Nonwestern World Views 3
- Regional Studies (RST) (Choose One):
  - 260 Asia 3
  - 280 Latin America 3
  - 270 Africa 3
  - 290 Middle East 3
*Social Studies concentration must choose RST 260

Area Four:
- EC 200 Economic Life 3
- PLS 200 Political Life 3
- PSY 105 Psychology: Science of Behavior 4
- SOC 200 Social Life 3

Curriculum Content 76

- AED 431 The Arts and the Child 4
- COM 103 Communication for Teachers 3
- COM 152 Mass Communication 3
- ED 421 Literature for Middle Childhood 3
- EDT 280 Classroom Applications of Computer-Based Technology 3
- ENG 340 Language for Teachers 4
- ENG 342 Advanced Composition for Teachers 3
- GEO 201 or 202 or 203 Principles of Physical/Cultural/Economic Geography 3
- HED 331 Health Education for Early and Middle Childhood 4
- HPR 260 First Aid 3
- HPR 281 Physical Education for Early and Middle Childhood 4
- HST 211 and 212 American Civilization 6
- MTH 243 and 244 Fundamentals of Mathematics I and II 8
- MUS 365 Methods and Materials for Teaching General Music 4

Preprofessional Education Courses 15
- ED 301 School in a Culturally Diverse Society: 5
  - The Middle Childhood Level Perspective
- ED 221 Practicum I (Middle Childhood Level) 1
- ED 303 Learning and Human Development: 5
  - The Middle Childhood Level Learner
- ED 223 Practicum II (Middle Childhood Level) 1
- EDS 333 Learning Differences: An Introduction 3

Concentrations 48—51

You must choose two of the four concentrations and complete all courses listed under the heading.

English/Language Arts 26
- ENG 205 African American Literature 3
- ENG 211 Introduction to Fiction 3
- ENG 303 Short Story Writing or 330 Business Writing or 344 Research Writing 4
Choose Two American Texts:
  - ENG 355 Early 19th Century, ENG 356 Later 19th Century, ENG 357 20th Century 8
- ENG 482 Grammatical Structures of English 4
- COM 365 Issues in Mass Communication 4

Math 24
- MTH 343 Algebra and Functions for Middle School Teachers 4
- MTH 344 Problem Solving for Middle School Teachers 4
- MTH 345 Geometry for Middle School Teachers 4
- MTH 348 Concepts in Calculus for Middle School Teachers 4
- MTH 446 Mathematical Modeling for Middle School Teachers 4
- STT 342 Probability and Statistics for Middle School Teachers 4

Social Studies 25
- HST 214 or 215 African American History 3
- HST 218 or 219 Ohio History 3
- HST 445 or 455 or 465 Non-Western History 4
- HST 470 or 475 or 480 or 485 United States History 4
Choose one government course:
  - PLS 212, 222, 322, 331, 340, 351, or 371 4
- GEO 149 Global Awareness through Map Study or GEO 201 or 202 or 203 Principles of Physical/Cultural/Economic Geography 3
  (Must be a different course than the one chosen to meet content requirements)
Any four or more hours from the following:
  - GEO 325, 370, 375, EC 201, 202, 203 or other appropriate history and/or social studies course 4

Science 24
- CHM 346 Concepts in Chemistry II 4.5
- PHY 346 Concepts & Applications of Physics II 4.5
- BIO 346 Concepts in Biology II 4.5
- GL 346 Earth Systems 4.5
- SM 445 Projects in Science 6
- SM 145 Foundations in Scientific Literacy and Problem Solving 3
- PHY 245* Concepts in Physics 4.5
CHM 245* Concepts in Physics 4.5
BIO 345* Concepts in Biology 4.5
GL 345* Concepts in Geology 4.5
*Meets General Education Science Requirements
Total 184–187

Associate of Arts (A.A.) and Associate of Science (A.S.) Degrees

Biological Sciences
The offerings for an associate degree in biological sciences are designed to provide students with a generalized background which may lead into almost any field of biology including botany, zoology, aquatics, oceanography, forestry, agriculture, and medical arts.

Requirements for the Associate of Science Degree

Freshman Year
First Quarter 18
BIO 112 4 CHM 121 5
ENG 101 4 MTH Sequence* 5
Second Quarter 17–18
BIO 114 4 CHM 122 5
ENG 102 4 MTH Sequence* 4–5
Third Quarter 16–17
BIO 115 4 CHM 123 5
MTH 145 3 MTH Sequence* 4–5

Sophomore Year
Fourth Quarter 17
BIO 252 5 Fine Arts 3
PLS 200 3 Elective 3
HST 101 3
Fifth Quarter 18
BIO 256 5 Great Books 3
SOC 200 3 PSY 105 4
HST 102 3
Sixth Quarter 17
BIO 253, 254, or 255 5 EC 200 3
Comp. Studies 3 Regional Studies 3
HST 103 3
Total Hours Required for Degree 103–105
*Choose sequence: MTH 228 or 229 and STT 264, 265, or MTH 229, 230, 231

Business and Administration
The Associate of Science degree in business and administration is designed to prepare students to pursue a bachelor’s degree in business with majors in accountancy, business economics, finance, management, and marketing. A knowledge of basic business functions and an awareness of the businessperson’s responsibilities in the political, social, and economic order of society are fundamental objectives of the program.

Requirements for the Associate of Science in Business Degree

Freshman Year
First Quarter 17–19
ENG 101 4 HST 101 3
MTH 128 or 129 3–5 EC 201 3
Science I 4
Second Quarter 19
ENG 102 4 HST 102 3
MTH 228 5 EC 202 3
Science II 4
Third Quarter 17
HST 103 3 Fine Arts 3
EC 203 3 Science III 4
CS 205 4

Sophomore Year
Fourth Quarter 16
ACC 201 3 TMK 201* 3
TMG 201* 3 PSY 105 4
MS 201 3
Fifth Quarter 19
ACC 202 3 ENG 330 4
MS 202 3 SOC 200 3
Regional Studies 3 Nonbusiness Elective 3
Sixth Quarter 18
ACC 203 3 TAD 232* 3
MS 203 3 Great Books 3
PLS 200 3 Comp. Studies 3
Total Hours Required for Degree 106–108
*These courses are applicable to the baccalaureate program with special conditions. TMG 201 is accepted for MGT 302 after the student earns a “C” or better in MGT 490, Managing Technology and the Environment, which is required by all business majors. TMG 201 is accepted for MGT 301 after the student earns a “C” or better in MKT 302, Marketing Management. TAD 232 is accepted for LAW 350, after the student earns a “C” or better in MGT 491, Public Policy in the Business Environment.
Chemistry
An associate degree in chemistry prepares students for work as entry-level technicians, or for articulation or transfer to a baccalaureate degree program. The student who earns this degree may have an interest in many different jobs. Entry-level jobs in chemical research, medical laboratories, pharmaceuticals, petroleum industry, plastics, and chemical manufacturing are all possibilities.

Requirements for the Associate of Science Degree

Freshman Year

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Second Quarter</th>
<th>Third Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121</td>
<td>CHM 122</td>
<td>CHM 123</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>ENG 101</td>
<td>ENG 102</td>
<td>MTH 231</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MTH 229</td>
<td>MTH 230</td>
<td>Great Books</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>HST 101</td>
<td>HST 102</td>
<td>HST 103</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Sophomore Year

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>Fifth Quarter</th>
<th>Sixth Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 211</td>
<td>CHM 212</td>
<td>CHM 213</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>CHM 215</td>
<td>CHM 216</td>
<td>CHM 217</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>PSY 105</td>
<td>EC 200</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours Required for Degree 97

Requirements for the Associate of Arts Degree

Freshman Year

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Second Quarter</th>
<th>Third Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>ENG 102</td>
<td>HST 103</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>HST 101</td>
<td>HST 102</td>
<td>MTH 145</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>EC 200</td>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Sophomore Year

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>Fifth Quarter</th>
<th>Sixth Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 201</td>
<td>GEO 202</td>
<td>GEO 203</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>GL 105</td>
<td>PSY 105</td>
<td>PL 200</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Great Books</td>
<td>Fine Arts</td>
<td>Electives</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Regional Studies</td>
<td>CS 205</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours Required for Degree 91

History
The Associate of Arts degree prepares students to pursue a baccalaureate degree in history. Through exposure to a broad spectrum of human experience in the past and present, students come to understand their relationships to other human beings and the structure of society. The history major is useful to students who wish to seek a career in such fields as teaching, journalism, archival work, government, politics, and law.

Requirements for the Associate of Arts Degree

Freshman Year

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Second Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>ENG 102</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>HST 101</td>
<td>HST 102</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>MTH 145</td>
<td>CS 205</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
Management Information System

An associate degree in MIS prepares a student for continued work on a bachelor's degree. Career opportunities include entry-level positions as business systems analysts, programmer analysts, applications programmer, or as support personnel in an information center.

Requirements for the Associate of Science Degree

Freshman Year

First Quarter 16–18
ENG 101 4
MTH 129 3
HST 102 3
Science I 4
Second Quarter 16
ENG 102 4
MTH 228 5
Science II 4
Third Quarter 18
Science III 4
CS 205 3
HST 103 3
Comp. Studies 4

Sophomore Year

Fourth Quarter 16
ACC 201 3
CS 208 4
Great Books 3
EC 201 3
MS 201 3

Fifth Quarter 17
ACC 202 3
CS 209 4
MS 202 3
EC 202 3
PSY 105 4

Sixth Quarter 16
ACC 203 3
MS 203 3
ENG 330 4
Fine Arts 3

Total Hours Required for Degree 97–99

Psychology

Students may choose to follow an Associate of Arts degree program in psychology to prepare them for further baccalaureate study. It is designed to provide a broad introduction to contemporary psychology. The Associate of Science degree is recommended for students planning careers in academics, research, or professional fields.

Requirements for the Associate of Arts Degree

Freshman Year

First Quarter 18
ENG 101 4
HST 101 3
MTH 145 3
HST 102 3
Science I 4
Second Quarter 15
ENG 102 4
HST 102 3
Science II 4
Third Quarter 18
HST 103 3
EC 200 3
CS 205 4
PSY 311 4

Sophomore Year

Fourth Quarter 15
SOC 200 3
Regional Studies 3
Great Books 3
Electives 6
Fifth Quarter 16
PLS 200 3
STT 264 4
HST 211 3
Fine Arts 3
Com Elective 3
Sixth Quarter 17
STT 265 4
Comp. Studies 3
HST 212 3
Elective 3
PSY 341 4

Total Hours Required for Degree 99
**Social Work**

A career in social work requires that the individual possess self-discipline, emotional stability, and intellectual creativity. Students should be interested in people of widely varying ages, abilities, and backgrounds. The program is designed to prepare students for further baccalaureate study in social work. Career opportunities for the college graduate with a major in social work are found in governmental, private, and voluntary agencies. Typical agencies would include family services, children services, public schools, hospitals, mental health centers, and probation/parole boards.

**Requirements for the Associate of Arts Degree**

**Freshman Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>ENG 101 – 4</td>
<td>PSY 105 – 4</td>
</tr>
<tr>
<td></td>
<td>HST 101 – 3</td>
<td>Science I – 4</td>
</tr>
<tr>
<td>Second Quarter</td>
<td>ENG 102 – 4</td>
<td>PSY 110 – 4</td>
</tr>
<tr>
<td></td>
<td>HST 102 – 3</td>
<td>Science II – 4</td>
</tr>
<tr>
<td>Third Quarter</td>
<td>HST 103 – 3</td>
<td>Elective – 3</td>
</tr>
<tr>
<td></td>
<td>MTH 145 – 3</td>
<td>BIO 107 – 4</td>
</tr>
<tr>
<td></td>
<td>COM 102 – 3</td>
<td></td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth Quarter</td>
<td>SOC 200 – 3</td>
<td>Great Books – 3</td>
</tr>
<tr>
<td></td>
<td>SW 270 – 4</td>
<td>Regional Studies – 3</td>
</tr>
<tr>
<td></td>
<td>EC 200 – 3</td>
<td></td>
</tr>
<tr>
<td>Fifth Quarter</td>
<td>PLS 200 – 3</td>
<td>Fine Arts – 3</td>
</tr>
<tr>
<td></td>
<td>CS 205 – 4</td>
<td>SOC 221 – 3</td>
</tr>
<tr>
<td></td>
<td>PSY 200 – 4</td>
<td></td>
</tr>
<tr>
<td>Sixth Quarter</td>
<td>CST 240 – 3</td>
<td>SW 271 – 4</td>
</tr>
<tr>
<td></td>
<td>PSY 341 – 4</td>
<td>SOC 332 – 4</td>
</tr>
</tbody>
</table>

**Total Hours Required for Degree** 94

Students planning to complete their baccalaureate degree in social work at Wright State University should consult the undergraduate catalog and the Social Work Department Handbook for specific courses required prior to beginning their junior year.

---Effective with fall 1993, RMO requirements include foreign language and research methods option for the B.A. in social work.

---Plan to take the licensure examination for the Social Work Assistant license.

**Sociology**

A major in sociology increases students' understanding of the organization and functioning of human social groups and of the methods and techniques for analyzing these social units. The study of sociology prepares students for careers in law, hospital administration, corrections, and government/community services. The Associate of Arts degree prepares students for further baccalaureate work.

**Requirements for the Associate of Arts Degree**

**Freshman Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td>ENG 101 – 4</td>
<td>PSY 105 – 4</td>
</tr>
<tr>
<td></td>
<td>HST 101 – 3</td>
<td>Science I – 4</td>
</tr>
<tr>
<td>Second Quarter</td>
<td>ENG 102 – 4</td>
<td>PSY 110 – 4</td>
</tr>
<tr>
<td></td>
<td>HST 102 – 3</td>
<td>Science II – 4</td>
</tr>
<tr>
<td>Third Quarter</td>
<td>HST 103 – 3</td>
<td>Science III – 4</td>
</tr>
<tr>
<td></td>
<td>SOC 200 – 3</td>
<td>Elective – 3</td>
</tr>
<tr>
<td></td>
<td>COM 102 – 3</td>
<td></td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth Quarter</td>
<td>Great Books – 3</td>
<td>Regional Studies – 3</td>
</tr>
<tr>
<td></td>
<td>EC 200 – 3</td>
<td>MTH 145 – 3</td>
</tr>
<tr>
<td></td>
<td>Elective – 3</td>
<td></td>
</tr>
<tr>
<td>Fifth Quarter</td>
<td>PLS 200 – 3</td>
<td>Fine Arts – 3</td>
</tr>
<tr>
<td></td>
<td>CS 205 – 4</td>
<td>PSY 200 – 4</td>
</tr>
<tr>
<td></td>
<td>SOC 221 – 3</td>
<td></td>
</tr>
<tr>
<td>Sixth Quarter</td>
<td>PSY 341 – 4</td>
<td>SOC 332 – 4</td>
</tr>
<tr>
<td></td>
<td>CST 240 – 3</td>
<td>Elective – 3</td>
</tr>
</tbody>
</table>

**Total Hours Required for Degree** 92
Technical Associate Degree Programs:

Associate of Applied Business (A.A.B.)
Associate of Applied Science (A.A.S.)
Associate of Technical Studies (A.T.S.)

Associate degrees in the following technical programs prepare students for career entry after two years of study. Technical education programs provide the type of career training desired by business, industry, governmental units, and many other employers.

Financial Management Technology

The associate degree in financial management technology prepares students for career entry after two years of study. Technical education programs provide the type of career training desired by business, governmental units, and many other employers. Graduates of the program may obtain the following positions: bookkeeper, accounting assistant, and accounting technician of computerized accounting systems, or one of the following in management: management trainee, assistant manager, production supervisor, foreman, small business manager.

Requirements for the Associate of Applied Business Degree

Freshman Year

First Quarter 16

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 201</td>
<td>3</td>
</tr>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
<tr>
<td>General Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Second Quarter 17

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 202</td>
<td>3</td>
</tr>
<tr>
<td>ENG 102</td>
<td>4</td>
</tr>
<tr>
<td>CS 205</td>
<td>4</td>
</tr>
</tbody>
</table>

Third Quarter 16

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 203</td>
<td>3</td>
</tr>
<tr>
<td>ENG 330</td>
<td>4</td>
</tr>
<tr>
<td>General Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Sophomore Year

Fourth Quarter 15

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAC 210</td>
<td>3</td>
</tr>
<tr>
<td>MS 201</td>
<td>3</td>
</tr>
<tr>
<td>TMK 201</td>
<td>3</td>
</tr>
</tbody>
</table>

Fifth Quarter 15

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAC 220</td>
<td>3</td>
</tr>
<tr>
<td>TFL 205</td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Sixth Quarter 15

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAC 260</td>
<td>3</td>
</tr>
<tr>
<td>TAC 224</td>
<td>3</td>
</tr>
<tr>
<td>TMG 270</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours Required for Degree 94

Mechanical Engineering Technology Computer-Aided Drafting Design Option

Computer-Aided Drafting majors prepare detailed drawings based on rough sketches, specifications, and calculations made by engineers and designers. They also calculate the strength, quality, quantity, and cost of materials. Final drawings contain a detailed view of the object as well as specifications for materials used, procedures followed, and other information to implement the job. They are also capable of working with computer-assisted drawing and preparing graphic display materials. WSU-LC CAD graduates will be able to choose from a wide range of jobs. Many graduates become draftspersons, CAD operators, design technicians, quality control technicians, or technical illustrators.

Requirements for the Associate of Applied Science Degree

Freshman Year

First Quarter 16

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
<tr>
<td>TEG 145</td>
<td>4</td>
</tr>
<tr>
<td>General Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Second Quarter 18

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 102</td>
<td>4</td>
</tr>
<tr>
<td>TMT 114</td>
<td>4</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Third Quarter 17

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 105</td>
<td>4</td>
</tr>
<tr>
<td>TEG 147</td>
<td>4</td>
</tr>
<tr>
<td>PHY 101</td>
<td>1</td>
</tr>
</tbody>
</table>
### Sophomore Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth Quarter</td>
<td></td>
</tr>
<tr>
<td>TMT 116</td>
<td>4</td>
</tr>
<tr>
<td>TEG 160</td>
<td>4</td>
</tr>
<tr>
<td>TEG 152</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Fifth Quarter</td>
<td>18</td>
</tr>
<tr>
<td>ENG 333</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>ENG 330</td>
<td>4</td>
</tr>
<tr>
<td>TEG 218</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Sixth Quarter</td>
<td>18</td>
</tr>
<tr>
<td>TEG 203</td>
<td>4</td>
</tr>
<tr>
<td>TEG 205</td>
<td>4</td>
</tr>
<tr>
<td>COM Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Hours Required for Degree</td>
<td>105</td>
</tr>
</tbody>
</table>

### Manufacturing Option

The manufacturing technology curriculum provides a comprehensive exposure to the production of engineering drawings and the various aspects of engineering designs. A solid foundation of engineering mathematics and science, combined with hands-on computer lab experience, provide students the necessary skills to handle state-of-the-art equipment and procedures. CNC programming and machining experience, as well as experience with software like AutoCAD, allows students to graduate thoroughly familiar with the entire manufacturing design and production process. Basic and advanced blueprints are used throughout the curriculum in order to learn ANSI and ISO standards.

### Requirements for the Associate of Applied Science Degree

#### Freshman Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Quarter</td>
<td></td>
</tr>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
<tr>
<td>TEG 145</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Second Quarter</td>
<td>17</td>
</tr>
<tr>
<td>ENG 102</td>
<td>4</td>
</tr>
<tr>
<td>TMT 114</td>
<td>4</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Quarter</td>
<td>17</td>
</tr>
<tr>
<td>PSY 105</td>
<td>4</td>
</tr>
<tr>
<td>TEG 151</td>
<td>4</td>
</tr>
<tr>
<td>PHY 101</td>
<td>1</td>
</tr>
</tbody>
</table>
### Sophomore Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth</td>
<td>TMT 116 4, TEG 160 4, TEG 152 4</td>
</tr>
<tr>
<td>Fifth</td>
<td>ENG 333 4, TEG 209 3, TEG 201 4, TEG 153 4, TEG 161 4</td>
</tr>
<tr>
<td>Sixth</td>
<td>TEG 203 4, TEG 270 3, COM Elective 3</td>
</tr>
</tbody>
</table>

**Total Hours Required for Degree**: 103

### Office Information Systems

#### Administrative Assistant Option

Prepares legal documents for court action or any correspondence involving legal acts, rights, offenses, and ethics. Requires a precise understanding of form and terminology. Accuracy is vital for the legal administrative assistant. The legal administrative assistant program combines training and practice on office machines and in office procedures, while teaching the nomenclature of law. Included is a basic introduction to accounting, business administration, and economics. Electives permit students to broaden knowledge in areas of career specialty or personal interest.

#### Requirements for the Associate of Applied Business Degree

### Freshman Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>TOA 230 3, EDT 211 3, ENG 101 4</td>
</tr>
<tr>
<td>Second</td>
<td>CS 205 4, EDT 212 3, ENG 102 4</td>
</tr>
<tr>
<td>Third</td>
<td>TOA 200 3, EDT 220 3, TOA 103 1</td>
</tr>
</tbody>
</table>

**Total Hours Required for Degree**: 16

### Sophomore Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth</td>
<td>EDT 221 3, TOA 224 3, COM 203 3</td>
</tr>
<tr>
<td>Fifth</td>
<td>TOA 105 1, EDT 222 3, TOA 225 3, TOA 233 3, General Education Elective 3</td>
</tr>
<tr>
<td>Sixth</td>
<td>TOA 106 1, TOA 226 3, TOA 231 3</td>
</tr>
</tbody>
</table>

**Total Hours Required for Degree**: 97
Medical Administrative Assistant Option

In addition to furnishing classroom techniques for perfecting basic office skills such as typing, speedwriting, composition, and the use of office machines, the medical administrative assistant technology program incorporates fundamental courses in administration, accounting, economics, and data processing, while giving students exacting instruction in medical terminology, medical office procedure, biology, and psychology. Students completing this program are prepared to fill medical administrative assistant positions.

Requirements for the Associate of Applied Business Degree

Freshman Year

First Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOA 230</td>
<td>3</td>
</tr>
<tr>
<td>EDT 211</td>
<td>3</td>
</tr>
<tr>
<td>ENG 101</td>
<td>4</td>
</tr>
</tbody>
</table>

Second Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 205</td>
<td>4</td>
</tr>
<tr>
<td>EDT 212</td>
<td>3</td>
</tr>
<tr>
<td>ENG 102</td>
<td>4</td>
</tr>
</tbody>
</table>

Third Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOA 200</td>
<td>3</td>
</tr>
<tr>
<td>EDT 220</td>
<td>3</td>
</tr>
<tr>
<td>TOA 112</td>
<td>3</td>
</tr>
</tbody>
</table>

Sophomore Year

Fourth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDT 221</td>
<td>3</td>
</tr>
<tr>
<td>TOA 224</td>
<td>3</td>
</tr>
<tr>
<td>TOA 252</td>
<td>3</td>
</tr>
</tbody>
</table>

Fifth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOA 105</td>
<td>1</td>
</tr>
<tr>
<td>TOA 225</td>
<td>3</td>
</tr>
<tr>
<td>TOA 233</td>
<td>3</td>
</tr>
</tbody>
</table>

Sixth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOA 106</td>
<td>1</td>
</tr>
<tr>
<td>TOA 226</td>
<td>3</td>
</tr>
<tr>
<td>TOA 231</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours Required for Degree

97

Office Information Systems—One-Year Certificate Program

The holder of a One-Year Certificate in today’s business world is a professional person who must make decisions and project and advance the public image of the executive for whom he or she works through communication skills and writing expertise. People in these positions must be proficient in all areas of office procedures and be skilled in operating office equipment in addition to assisting the executive. The Office Information Systems Program encompasses all of these necessary skills, while giving the student a well-rounded background. The One-Year Certificate is recognized by the state of Ohio as a training program, which qualifies students for entry-level administrative assistant positions.

A minimum of 45 total credits is needed in order to obtain a One-Year Certificate. These must consist of a combination of technical and nontechnical classes.

Select a minimum of 33 credits from the courses below:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOA 101</td>
<td>1</td>
</tr>
<tr>
<td>TOA 102</td>
<td>1</td>
</tr>
<tr>
<td>TOA 103</td>
<td>1</td>
</tr>
<tr>
<td>TOA 230</td>
<td>3</td>
</tr>
<tr>
<td>TOA 235</td>
<td>1</td>
</tr>
<tr>
<td>TOA 233</td>
<td>3</td>
</tr>
<tr>
<td>TOA 111</td>
<td>3</td>
</tr>
<tr>
<td>TOA 107</td>
<td>4</td>
</tr>
</tbody>
</table>

Select a minimum of 12 credits from the courses below:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDT 211</td>
<td>3</td>
</tr>
<tr>
<td>EDT 220</td>
<td>3</td>
</tr>
<tr>
<td>EDT 222</td>
<td>3</td>
</tr>
<tr>
<td>ENG 101</td>
<td>3</td>
</tr>
<tr>
<td>COM 203</td>
<td>3</td>
</tr>
</tbody>
</table>
Associate of Technical Study

The Associate of Technical Study degree uses courses from existing two-year technical programs along with the General Education base to fulfill a unique educational need. Intended for individuals with specialized technical interests, the Associate of Technical Study degree allows the student to develop, with the guidance of a designated faculty advisor, an individualized technical program. This program must establish an educational goal and include a concentration of courses required to accomplish that goal.

A minimum of 45 credit hours of the total program must be in a clearly identifiable area of concentration. This technical component may be developed by combining courses from two or more academic disciplines. General Education requirements and basic requirements must each account for a minimum of 21 credit hours of the program total or 42 total credit hours. The Associate of Technical Study degree requires from 90 to 110 total credit hours; graduation requirements are the same as for other A.A.S. and A.A.B. degrees.

Many job opportunities in industry and business today are requiring a broader base exposure of the technologies such as technicians, programmers, and designers. The Associate of Technical Study degree provides needed flexibility that industry finds essential as it continues to diversify and meet the needs of a changing industrial market.

Students can choose to follow a pre-designed program, modify a program, or design one to meet their own needs. Advising is a key component of these programs. Interested students should start by contacting a Lake Campus advisor to discuss the unique opportunities available through A.T.S. degrees.

Requirements for the Associate of Technical Study Degree

General Education Requirements

Minimum 21

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101 and 102</td>
<td>8</td>
</tr>
<tr>
<td>PSY 105</td>
<td>4</td>
</tr>
<tr>
<td>COM Elective</td>
<td>3</td>
</tr>
<tr>
<td>General Education Electives</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

Basic Requirements

Minimum 21

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 205</td>
<td>4</td>
</tr>
<tr>
<td>TEG 141</td>
<td>2</td>
</tr>
<tr>
<td>Math (level 3 or higher)</td>
<td>3-5</td>
</tr>
<tr>
<td>Remaining hours to be selected from related courses deemed appropriate to the student's elected concentration. Academic advisor approval required.</td>
<td>10-12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

Technical Requirements

Minimum 48

This technical component may be developed by combining courses from two or more of the academic programs in the technical area. This development is done through the guidance of a designated faculty advisor. The technical programs are: financial management technology, engineering technology, and business technology.

Total Hours Required

Minimum 90

Certificates

Certificate in Management

The Certificate in Management is an 18-credit hour, three-quarter sequence of courses designed to prepare students to become effective managers. The course offerings are for persons who have had little or no formal training in management principles. Courses meet either during the week or on weekends, allowing a convenient time choice. All certificate classes may be applied toward an associate degree.

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 201-3</td>
<td>Accounting Concepts and Principles I</td>
</tr>
<tr>
<td>MGT 100-3</td>
<td>The World of Business and Administration</td>
</tr>
</tbody>
</table>

Winter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 200-3</td>
<td>Elements of Management and Supervision</td>
</tr>
<tr>
<td>COM 141-3</td>
<td>Small-Group Communication</td>
</tr>
</tbody>
</table>

Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMG 201-3</td>
<td>Fundamentals of Management</td>
</tr>
<tr>
<td>EC 201-3</td>
<td>Principles of Economics</td>
</tr>
</tbody>
</table>

Advanced Certificate in Management

The Advanced Certificate in Management is a 16-credit hour, three-quarter sequence of courses designed to prepare students to become effective managers. The course offerings are for persons who have completed the Certificate in Management. All courses meet during the week and on weekends and may be applied toward an associate degree.

Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMG 270-3</td>
<td>Production Management</td>
</tr>
<tr>
<td>TMK 201-3</td>
<td>Basic Marketing I</td>
</tr>
</tbody>
</table>

Winter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 203-3</td>
<td>Business Communication</td>
</tr>
<tr>
<td>TMG 210-3</td>
<td>Personnel Management</td>
</tr>
</tbody>
</table>
Certificate in Desktop Publishing

The Certificate in Desktop Publishing is a nine-credit hour, three-quarter sequence of three courses designed for the person in the office wishing to learn or implement desktop publishing skills.

Fall
TOA 241-3 Beginning Desktop Publishing

Winter
TOA 242-3 Advanced Desktop Publishing

Spring
TOA 247-3 Desktop Publishing Applications

Certificate in Word Information Processing

The Certificate in Word Information Processing is a nine-credit hour, three-quarter sequence of courses designed for the person in the office wishing to upgrade or to implement word processing skills in an office environment and to train those desiring to learn the skill of word processing.

Fall
EDT 220-3 Introduction to Word/Information Processing

Winter
EDT 221-3 Intermediate Word/Information Processing

Spring
EDT 222-3 Advanced Word/Information Processing with Desktop Applications

Certificate in CAD/CAM

The Certificate in “CAD/CAM” is an 18-credit hour, three-quarter sequence of courses designed to provide a thorough understanding of how the computer-aided design and manufacturing process functions in industry. The certificate program covers the fundamental principles and methods used in designing a product with AutoCAD. Additionally, the student will use CAM software to produce machinable CNC code and manufacture actual products designed in class. The certificate is designed for individuals who have a thorough understanding of drafting principles, but no CAD experience is assumed. In order to better serve the individuals enrolling in this program, a maximum of 12 students has been set. All courses meet during the week and on Saturdays and may be applied toward an associate degree.

Fall
TEG 297-3 Fundamentals of CAD I
TEG 297-3 Beginning Computer-Aided Manufacturing

Winter
TEG 297-3 Fundamentals of CAD II
TEG 297-3 CNC Programming I

Spring
TEG 297-3 Fundamentals of CAD III
TEG 297-3 CNC Programming II

Certificate in Microcomputer Applications

The Certificate in Microcomputer Applications is a 12-credit hour, three-quarter sequence of courses designed to provide a thorough coverage of many practical uses of microcomputers. A broad range of applications will be presented along with fundamental computer operations to prepare students to use microcomputers effectively at home or in business. Depending on the chosen major, some or all courses may be applicable toward an associate degree.

Fall
CS 205-4 Computer Literacy and Office Automation

Winter
CS 206-4 Computer Software Productivity Tools

Spring
CS 207-4 Advanced Office Productivity II

Certificate in PhotoShop Design and Applications

TOA 297-3 Beginning PhotoShop Applications
TOA 297-3 Intermediate PhotoShop Applications
TOA 297-3 Advanced PhotoShop Applications

Certificate in Software Applications

Requires nine one-credit hour software courses. See Advisor for approval of courses.
Throughout this catalog, specific courses are indicated by abbreviations followed by a number. The list below shows the abbreviations for the different areas of study, followed by the name of each area of study and the page on which the course descriptions for the areas begin.

Please note that the courses are alphabetized by the course’s name, not by the abbreviation, both here and later in the course description section.

ACC Accountancy, p. 212
AES Aerospace Science, p. 213
AFS African and African American Studies, p. 214
ANT Anatomy, p. 214
ATH Anthropology, p. 214
ART Art and Art History, p. 216
AED Art Education, p. 218
AT Art Therapy, p. 219
ATR Athletic Training, p. 219
AVI Aviation, p. 220
BMB Biochemistry and Molecular Biology, p. 221
BIO Biological Sciences, p. 221
BME Biomedical Engineering, p. 225
BUS Business, p. 226
CHM Chemistry, p. 226
CHI Chinese, p. 229
CLS Classics, p. 229
COM Communication, p. 230
CPL Comparative Literature, p. 233
CST Comparative Studies, p. 233
CSE Comparative Studies, p. 233
CEG Computer Engineering, p. 234
CS Computer Science, p. 236
CPE Cooperative Education, p. 238
CNS Counseling, p. 239
DAN Dance, p. 239
DN Danish, p. 242
DEV Developmental Education, p. 242
EC Economics, p. 243
ED Education, p. 245
EDL Educational Leadership, p. 248
EDT Educational Technology, p. 248
EDE Education—Early Childhood Education, p. 250
EDS Education—Special Education, p. 252
EE Electrical Engineering, p. 253
EGR Engineering, p. 256
EP Engineering Physics, p. 257
ENG English, p. 257
EH Environmental Health Sciences, p. 261
FIN Finance, p. 262
FR French, p. 264
GEO Geography, p. 265
GL Geological Sciences, p. 267
GER German, p. 271
GR Greek, p. 272
HUT Health, p. 273
HED Health Education, p. 273
HPR Health, Physical Education, and Recreation, p. 273
HST History, p. 275
IB International Business, p. 277
ISE Industrial and Systems Engineering, p. 277
ITA Italian, p. 279
JPN Japanese, p. 279
LAT Latin, p. 279
LAW Law, p. 280
LA Liberal Arts, p. 280
LI Linguistics, p. 281
MGT Management, p. 281
MIS Management Information Systems, p. 283
MS Management Science, p. 284
MKT Marketing, p. 285
MTH Mathematics, p. 286
ME Mechanical and Materials Engineering, p. 290
MT Medical Technology, p. 293
M&I Microbiology and Immunology, p. 294
MIL Military Science, p. 295
ML Modern Language Humanities, p. 296
MP Motion Pictures, p. 296
MUA Applied Music, p. 297
MUS Music, p. 299
NUR Nursing, p. 305
OA Office Administration, p. 307
PHR Pharmacology, p. 308
PHL Philosophy, p. 308
PHY Physics, p. 310
P&B Physiology and Biophysics, p. 312
PLS Political Science, p. 313
POR Portuguese, p. 317
PSY Psychology, p. 317
RST Regional Studies, p. 320
RSE Regional Studies, p. 320
RHB Rehabilitation, p. 320
REL Religion, p. 322
RUS Russian, p. 324
SM Science and Math, p. 324
SW Social Work, p. 325
SOC Sociology, p. 326
SPN Spanish, p. 328

Course Numbering System

0-99 Remedial precollege-level courses.

100-499 Lower division courses intended for undergraduate credit only. The first digit indicates the general level of the course: 1 for a first-year course, 2 for a second-year course, 3 for a third-year course, four for a fourth-year course. Courses in this category that are acceptable for graduate credit carry alternate numbers in which the first digit only is changed to a 5 or a 6 according to the definitions below.

500-599 Courses that carry graduate credit only in a major field different from that of the department offering the course. Most such courses will be alternate designations of courses normally numbered 300-499.

600-699 Courses that carry graduate credit in any major field and have alternate designations in which the first digit is a three or four when taken for undergraduate credit.

700-999 Courses intended for graduate credit only.

The number following the hyphen indicates the number of credit hours for that course. Courses designated by consecutive numbers are related courses; courses to be taken in sequence are so designated in the descriptions.
A list of course abbreviations and an explanation of the course numbering system can be found on pages 210 and 211. Not all courses described here are offered every quarter or every year. For a more detailed listing of prerequisites, enrollment restrictions, and specific courses offered in a particular quarter, consult the Wright State class schedule published each fall, winter, spring, and summer.

Accountancy/ACC

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

200-3 Individual Income Tax Preparation
Introduction to the basic concepts of income deductions, credits, and exemptions. Calculation of taxable income and preparation of the individual income tax returns and selected schedules. May be taken for letter grade or pass/unsatisfactory. For nonbusiness majors only.

201-3 Accounting Concepts and Principles I, II
Introduction to accounting for business enterprises. Includes analysis of financial statements and reports for managers and other users.

202-3 Accounting Concepts and Principles I, II
Introduction to accounting for business enterprises. Includes analysis of financial statements and reports for managers and other users. Prerequisite: ACC 201.

203-3 Introduction to Accounting Systems
Introduction to the collection of accounting data for use in the preparation of financial statements and other accounting reports. Course will include completion of one or more practice cases. Prerequisite: ACC 202.

All of the following courses require junior standing in addition to the listed prerequisites.

300-3 Accounting for Managerial Analysis
Analysis and interpretation of accounting information for management in the functions of planning, control, and decision making. For nonmajors only. Prerequisite: For MIS majors and other students who are required to take ACC 328, ACC 203. For all others, ACC 202.

304-3, Financial Accounting I
Development of financial accounting theory and its application to complex problems in the valuation of balance sheet accounts, determination of net income, and preparation of financial statements. Prerequisite: ACC 203, CS 205.

305-3 Financial Accounting II
Development of financial accounting theory and its application to complex problems in the valuation of balance sheet accounts, determination of net income, and preparation of financial statements. Prerequisite: ACC 304, CS 205.

306-3 Financial Accounting III
Development of financial accounting theory and its application to complex problems in the valuation of balance sheet accounts, determination of net income, and preparation of financial statements. Prerequisite: ACC 305.

321-3 Management Accounting I
Discusses concepts, techniques, and accounting procedures for both manufacturing and service firms. Prerequisite: ACC 203, CS 205.

322-3 Management Accounting II
Application of managerial accounting concepts and techniques to complex problems in manufacturing and accounting and to other areas including distribution, research, and development costs. Prerequisite: ACC 321.

328-3 Accounting Systems I
Fundamental concepts of information, communication, and systems that form the framework for the design of data processing and accounting systems. Prerequisite: Accountancy majors. ACC 321, MIS 300, or MIS 322; all other majors, ACC 321 or ACC 300 and MIS 300 or MIS 322.

407-3 Financial Accounting IV
Comprehensive study of business combinations and consolidated financial statements. Prerequisite: ACC 306.

412-3 Accounting Systems II
Application of accounting systems in handling principal business transactions and situations. Prerequisite: ACC 328.

421-3 Auditing I
Discusses financial, operational, and compliance audits from the user's perspective of audit reports. Examines purpose and limitations of audits, as well as the legal and regulatory environments in which audits are performed. Prerequisite: ACC 306, 328.

422-3 Auditing II
Application of auditing techniques, including planning, execution, and documentation of findings, with a focus on internal auditing, Audit sampling, auditing in a computerized environment, and other current auditing issues are discussed. Prerequisite: ACC 421.

431-3 Governmental Accounting
Discusses principles of the fund accounting model. The primary focus of the course will be the application of these principles to state and local government units. Prerequisite: ACC 305.

441-3 Income Tax Accounting I
Discusses history, theory, and basic tax structure pertaining to individuals and businesses. Prerequisite: ACC 203.
442-3 Income Tax Accounting II
An introduction to the federal income taxation of business entities and owners. Consideration is also given to the federal income tax implications of property transfer, the alternative minimum tax, and the legal and ethical responsibilities of the tax practitioner. Prerequisite: ACC 441.

451-3 International Accounting
Examines comparative country practices and the international aspects of various accounting topics—financial and managerial accounting, social accounting, inflation accounting, auditing, and taxation. Prerequisite: ACC 202 or equivalent.

477-1 to 3 Special Topics in Accounting
Topics and prerequisites vary.

478-3 Honors: Independent Study in Accountancy
Research in accounting for fulfillment of the Honors Program project requirement.

481-3 Internship in Accounting
One quarter, faculty-supervised internship in the areas of public, industrial, or governmental accounting. At the conclusion of the internship the student is required to submit a report based on a topic agreed upon between the student and the sponsoring faculty. Prerequisite: ACC 203.

498-3 Seminar in Management Accounting
Identification, description, and analysis of the behavioral science and quantitative methods applications for management accounting. Prerequisite: ACC 306, 322.

499-3 Seminar in Financial Accounting
Identification and analysis of contemporary issues and problems in the area of financial accounting. Prerequisite: ACC 306. Pre- or corequisite: ACC 421.

Aerospace Science/AES

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

121-1 The Air Force Today I
An introduction to the United States Air Force (USAF) ROTC. Topics include: mission and organization of the Air Force, officer skills and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and communication skills.

122-1 The Air Force Today II
An introduction to the USAF ROTC. Topics include: mission and organization of the Air Force, officer skills and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and communication skills.

123-1 The Air Force Today III
An introduction to USAF ROTC. Topics include: mission and organization of the Air Force, officer skills and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and communication skills.

221-1 The Air Force Way I
A survey course facilitating the transition from USAF ROTC cadet to ROTC candidate. Featured topics include: Air Force heritage, leaders, Quality Air Force, ethics and values, leadership, group leadership problems, and application of communication skills.

222-1 The Air Force Way II
A survey course facilitating the transition from USAF ROTC cadet to ROTC candidate. Featured topics include: Air Force heritage, leaders, Quality Air Force, ethics and values, leadership, group leadership problems, and application of communication skills.

223-1 The Air Force Way III
A survey course facilitating the transition from USAF ROTC cadet to ROTC candidate. Featured topics include: Air Force heritage, leaders, Quality Air Force, ethics and values, leadership, group leadership problems, and application of communication skills.

331-3 Air Force Leadership and Management I
Study of leadership and quality management fundamentals, professional knowledge, the USAF doctrine, leadership ethics, and communication skills. Case studies are used to examine the USAF leadership and management situations.

332-3 Air Force Leadership and Management II
Study of leadership and quality management fundamentals, professional knowledge, the USAF doctrine, leadership ethics, and communication skills. Case studies are used to examine the USAF leadership and management situations. Prerequisite: AES 331.

333-3 Air Force Leadership and Management III
Study of leadership and quality management fundamentals, professional knowledge, the USAF doctrine, leadership ethics, and communication skills. Case studies are used to examine the USAF leadership and management situations. Prerequisite: AES 332.

431-3 Preparation for Active Duty I
Examines national security process, regional studies, advanced leadership ethics, and the USAF doctrine. Topics include the military as a profession, leadership roles, military justice, civilian control of the military, current issues, and refining communication skills.
432-3 Preparation for Active Duty II
Examines national security process, regional studies, advanced leadership ethics, and the USAF doctrine. Topics include the military as a profession, officership, military justice, civilian control of the military, current issues, and refining communication skills. Prerequisite: AES 431.

433-3 Preparation for Active Duty III
Examines national security process, regional studies, advanced leadership ethics, and the USAF doctrine. Topics include the military as a profession, officership, military justice, civilian control of the military, current issues, and refining communication skills. Prerequisite: AES 432.

African and African American Studies/AFS
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

200-4 What is the African and African American Experience?
A historical and methodological analysis of both African histories and cultures and the history of the diaspora struggles of persons of African descent to create a life and distinct culture among world civilizations.

300-4 African American Perspectives and Models of Success
A critical study of real-life problems impacting African and African American life: economics, education, crime, gender issues, urban problems, globalization, etc. This course utilizes real-life models of success as examples of how to effectively overcome these problems. Prerequisite: AFS 200.

400-4 Service Experience
Field placement of students in community organizations, social service agencies, and governmental entities where they will engage in work that relates to and enhances their understanding of the African American experience. Prerequisite: AFS 200 and 300.

401-2 to 4 Senior Research Project
Divided over two quarters, this course allows students to bring their study in the major to completion through a major research project that focuses on one specific aspect of African or African American life. Prerequisite: AFS 200, 300, and 400.

499-1 to 4 Special Topics in African and African American Studies
Selected topics relevant to historical and current issues in African and African American studies. Course may be repeated for up to four credit hours.

Anatomy/ANT
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

201-4 Basic Human Anatomy I
Osteology; histology of basic tissues; and topographical, histological, and developmental anatomy of nervous and endocrine systems. Laboratory exercises use human materials. 2.5 hours lecture, three hours lab.

202-4 Basic Human Anatomy II
Basic topographical, histological, and developmental anatomy of the muscular, cardiovascular, digestive, respiratory, urinary, and reproductive systems. Laboratory exercises use human materials. 2.5 hours lecture, three hours lab.

320-5 Anatomy of Human Motion
The skeletal, articular, nervous, cardiovascular, and respiratory systems as they pertain to the muscular system are presented. Basic muscle actions are described; sequential muscle actions and other concepts of kinesiology are not discussed. Prerequisite: BIO 105, 107.

488-1 Independent Reading
499-1 to 5 Selected Topics in Anatomy
May be taken for letter grade or pass/unsatisfactory.

Anthropology/ATH
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

200-3 World of Primitive Contemporaries
Survey of the world's non-Western cultures. Discussions include the various ways contemporary peoples live and the relationship between primitive and contemporary cultures.

241-3 Introduction to Physical Anthropology
An overview of human biology and behavior, including human evolution, primate behavior, and human physical variation.

242-3 Introduction to Archaeology
Introduction to the nature of archaeological data, techniques of archaeological dating, and methods of data collection, analysis, and interpretation.

250-3 Introduction to Cultural and Social Anthropology
Surveys various fields or sub-disciplines of anthropology to enable anthropology majors to complete upper-division courses effectively. Emphasis on identifying cultural symbols and social interaction in ethnic groups. Prerequisite: CST 240 or anthropology major.
300-4 Laboratory in Archaeology
Emphasizes recognition and analysis of archaeological remains from prehistoric and historic sites. Students develop an original analysis of some body of archaeological material. Prerequisite: ATH 242, 369, or permission of instructor.

340-4 Applied Anthropology: An Introduction
Introduces various aspects of applied anthropology as currently used in a variety of behavioral activity fields locally, nationally, and internationally.

341-4 Indians of North America
Survey of selected North American Indian societies, contrasting their modern and aboriginal cultures.

342-4 Anthropology of Sex and Gender
Studies similarities and differences between males and females, their status, roles in selected societies, stereotypes, physical and behavioral aspects of sex and gender, and cross-cultural variations in gender roles.

346-4 Anthropology of Religion
(Also listed as REL 362.) Anthropological approach to meaning and function of religion in social life, and nature of thought or belief systems that give rise to different forms of religious life. Emphasis on primitive and peasant societies.

351-4 Human Evolution
History, description, and interpretation of the fossil record for primate evolution with emphasis on human evolution.

352-4 Primate Behavior
Detailed examination of the behavior of nonhuman primates, including monkeys and apes, as it relates to human evolution and behavior.

358-4 Human Variation and Adaptation
Examination of human biological variation focusing on interpopulation variation, environmental adaptation, and the concept of race.

365-4 Archaeology of North America
Detailed examination of the major prehistoric cultures of North America. Emphasis on eastern North American prehistory.

368-4 Archaeological Field Techniques
Classroom and field preparation for archaeological survey and excavations. Prerequisite: ATH 242 or permission of instructor.

369-6 to 12 Field School in Archaeology
Excavation training on prehistoric sites.

392-2 to 4 Readings in Anthropology
May be taken for letter grade or pass/unsatisfactory.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of anthropology. Topics vary.

400-4 Topics in Archaeology
Advanced study of various specialized aspects of archaeology. Classes may be lecture or seminar.

410-4 Special Topics in Cultural Anthropology
Selected topics concerning the method and theory of anthropological thought and their relationship to the allied disciplines of economics, linguistics, art, politics, and history. Emphasis on current trends influencing research in cultural anthropology. Topics vary.

446-4 Peoples and Cultures of South Asia
Survey and analysis of cultural diversity and unity in southern Asia, particularly India, Pakistan, Bangladesh, and Sri Lanka.

447-4 Peoples and Cultures of Africa
Survey of the peoples and sociocultural systems of Africa with emphasis on sub-Saharan ecological and biocultural relationships.

448-4 Development of Ethnological Thought
Surveys historical development of ethnological thought and emphasizes theories of social and cultural change.

450-4 Political Anthropology
(Also listed as PLS 450.) Study of the cultural part of primitive societies that we recognize as political organization. An attempt is made to show how in less complex (primitive) societies new local communities come into being through fission.

455-4 Biomedical Anthropology
An anthropological perspective of health and illness in selected societies of the world. Integrates physical, social, and cultural dimensions of disease, nutrition, fertility and population growth, health beliefs and practices, and the consequences of culture change and modernization.

458-4 Anthropology of Women's Health
Integrates biological and sociological dimensions of women's health throughout the world. It examines cross-cultural variation in disease and illness and the sociocultural contexts that define models of women's health.

465-4 Seminar in Woodland Archaeology
Intensive review of the prehistoric Woodland period (600 B.C.-A.D. 900) of eastern North America. Regional cultures such as Adena and Ohio Hopewell and topics including trade, the economy, political organization, and mortuary customs are considered.

468-4 Seminar in Archaeological Theory
Wide-ranging survey of traditional and contemporary archaeological theory, with study of its applications in various parts of the world. Prerequisite: ATH 242 or permission of instructor.
475-4 Historical Archaeology
Focuses on the post-European discovery period of America. Archaeological interpretations of colonial, plantation, industrial, frontier, and urban sites and materials are explored in seminar discussions and through laboratory analyses of southwest Ohio site collections. Prerequisite: ATH 242.

492-2 to 4 Independent Research in Anthropology
May be taken for letter grade or pass/unsatisfactory.

Art and Art History/ART

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

All courses in the Department of Art and Art History are offered with a pass/unsatisfactory grade option.

200-1 Sophomore Workshop
Introduction to slide taking, matting and framing and professional opportunities for art majors. This course is a prerequisite for all upper level studio art courses. Graded pass/unsatisfactory.

206-4 Drawing I
Introduction to materials, techniques, and concepts of drawing.

207-4 Photography I
Exploration of basic processes and concepts in still photography. Work involves learning basic skills and techniques. Assignments designed to develop an understanding of light as an expressive element.

208-4 Sculpture I
Introduction to basic processes, materials, and concepts of sculpture.

209-4 Introduction to Color
Introduction to the study of the elements and interaction of color.

211-4 Art History I
Painting and sculpture before A.D. 1150. Introduces the basic concepts of visual and stylistic analysis and a historical survey of painting and sculpture in the Western world from prehistoric to medieval times.

212-4 Art History II
Painting and sculpture from 1150 to 1850. Historical survey of painting and sculpture in the Western world from late medieval times to the dawn of the modern era. Prerequisite: ART 211 or permission of instructor.

213-4 Art History III
Painting and sculpture since 1850. Historical survey of modern painting and sculpture in the Western world. Prerequisite: ART 212 or permission of instructor.

214-3 Visual Art in Western Culture
Introduction to the visual arts focusing on selected major works of art throughout history. Discusses comparisons across time, basic art media, and the formal characteristics of art. (Previously listed as AED 214.)

215-4 Foundations of Art Education
Introductory course in art education involving approaches for aesthetic awareness, inquiries into theories of art, art appreciation and criticism, current issues, as well as child development through art, and art education methodologies.

228-4 Drawing II
Introduces concepts and techniques of drawing. May include studies from the human figure and other natural forms. Topics vary. Prerequisite: ART 206.

258-4 Photography II
Development of personal concepts and aesthetic expression in photography. Emphasis on individualized approach to photographic problems that arise from students' work. Prerequisite: ART 207 or permission of instructor.

300-1 to 4 Studio Workshop
Studio experience directly involving students with a professional artist executing a special project. Covers a range of information from preliminary planning to final discussion on the project. Topics vary.

301-1 to 4 Independent Study in Art
Special studies and intensive individual work with faculty supervision in art.

303-1 to 4 Independent Study in Art
Special studies and intensive individual work with faculty supervision in art.

309-4 Studies in Art Theory and Philosophy
Courses offered under this number provide both historical surveys and intensive studies in art theory and philosophy. Prerequisite: ART 213 or permission of instructor.

328-4 Intermediate Drawing
Development of personal concepts and aesthetic expression in drawing. Emphasis on individualized approach to drawing problems that arise from the work of students. Topics vary. Prerequisite: ART 228.

337-4 Beginning Expanded Media
Study of visual and aesthetic techniques and concepts emphasizing the development of individual artistic expression in various media. Prerequisite: ART 228, 258, and 378; or permission of the instructor required.

347-4 Beginning Painting
Working from still, figure, and landscape emphasizing the use of color and drawing in visual organization. Prerequisite: ART 206, 209, and 228.
348-4 Intermediate Painting
Emphasis on principles of pictorial organization. Attention to the relationship of subject matter and abstraction as related to contemporary and traditional approaches. Prerequisite: ART 347 or permission of instructor.

349-4 Intermediate Painting
Emphasis on principles of pictorial organization. Attention to the relationship of subject matter and abstraction as related to contemporary and traditional approaches. Prerequisite ART 348 or permission of instructor.

358-4 Intermediate Black-and-White Photography
Development of personal concepts and aesthetic expression in photography. Emphasis on individualized approach to photographic problems that arise from the work of students. Topics vary. Prerequisite: ART 258 or permission of instructor.

359-4 Color Photography
Development of personal concepts and aesthetic expression in photography. Emphasis on individualized approach to photographic problems that arise from the work of students. Topics vary. Prerequisite: ART 258.

366-4 Beginning Printmaking—Relief
Exploration of printmaking, stressing relief methods using wood and inlaid. Examination of aesthetic possibilities of the media. Topics vary. May be taken for letter grade or pass/unsatisfactory. Prerequisite: ART 206, 228.

367-4 Beginning Printmaking—Intaglio
Exploration of printmaking stressing intaglio methods: etching, engraving, drypoint, aquatint, and liftgrounds. Use of black-and-white techniques and introduction to color printing. Topics vary. Prerequisite: ART 206, 228 (ART 228 may be taken concurrently) or permission of instructor.

368-4 Beginning Printmaking—Lithography
Introduction to basic lithographic techniques using stone and/or metal plate. Emphasis on black-and-white printing and aesthetic possibilities of the media. Topics vary. Prerequisite: ART 206, 228 (ART 228 may be taken concurrently), or permission of instructor.

369-4 Beginning Printmaking—Screenprinting
Introduction to silk-screening techniques such as stencil cut, photo stencil, and crayon and touche resists. Exploration of aesthetic possibilities of the media. Topics vary. Prerequisite: ART 206, 207, 209 or permission of instructor.

375-4 Intermediate Sculpture—Armatures, Molds, and Casting
Development of personal concepts and aesthetic expression in sculpture. Emphasis on individualized approach to sculptural problems using armature structure, mould making, and casting. May be taken for letter grade or pass/unsatisfactory. Prerequisite: ART 208 or permission of instructor.

376-4 Intermediate Sculpture—Clay Forming and Firing
Development of personal concepts and aesthetic expression in sculpture. Emphasis on individualized approach to sculptural problems using clay forming and firing. May be taken for letter grade or pass/unsatisfactory. Prerequisite: ART 208 or permission of instructor.

377-4 Intermediate Sculpture—Metal Fabricating and Stone Carving
Development of personal concepts and aesthetic expression in sculpture. Emphasis on individualized approach to sculptural problems using metal fabricating and stone carving. May be taken for letter grade or pass/unsatisfactory. Prerequisite: ART 208 or permission of instructor.

378-4 Intermediate Sculpture—Wood Carving and Fabricating
Development of personal concepts and aesthetic expression in sculpture. Emphasis on individualized approach to sculptural problems using wood carving and wood fabricating. May be taken for letter grade or pass/unsatisfactory. Prerequisite: ART 208 or permission of instructor.

379-4 Intermediate Sculpture—Figure Modeling
Introduction to techniques and concepts involved in sculpting from life. Concentration on the development of greater understanding of the human figure and an increased sensitivity to threedimensional form. Course may be repeated for credit. May be taken for letter grade or pass/unsatisfactory. Prerequisite: ART 208 or permission of instructor.

397-4 Introduction to Museology
Examination of the history, purposes, and literature of museums and galleries. Various facets of gallery management such as planning, organizing, and installing exhibitions. Prerequisite: ART 211, 212, and 213.

400-2 Senior Seminar
Group discussions of contemporary writings in art and critiques of student work in a peer setting with faculty and visiting artists participating on an informal basis. Prerequisite: Successful completion of BFA review.

401-1 to 4 Independent Study in Art History
Intensive individual work with faculty supervision in art history.

404-1 to 4 Studies in Art History
Provides opportunities to explore problems and approaches to art and art history and includes cross-period and interdisciplinary studies. Prerequisite: ART 213 or permission of instructor.

405-1 to 4 Studies in Art
Provides opportunities to explore problems and approaches to art and includes cross-media and interdisciplinary studies.
409-4 Art Theory and Criticism
   Historical surveys and intensive studies of art
   theory and criticism. Prerequisite: ART 213
   or permission of instructor.

410-4 Studies in American Art
   General surveys and intensive studies of periods,
   major movements, and artists of the time.
   Prerequisite: ART 213 or permission of instructor.

411-4 Studies in Ancient and Classical Art
   (Also listed as CLS 340.) General surveys and
   intensive studies of the period, major movements,
   and artists of the time.

412-4 Studies in Medieval Art
   General surveys and intensive studies of the
   period, major movements, and artists of the time.
   Prerequisite: ART 212 or permission of instructor.

413-4 Studies in Renaissance Art
   General surveys and intensive studies of the
   period, major movements, and artists of the time.
   Prerequisite: ART 212 or permission of instructor.

414-4 Studies in Baroque Art
   General surveys and intensive studies of the
   period, major movements, and artists of the time.
   Prerequisite: ART 212 or permission of instructor.

415-4 Studies in 19th-Century Art
   General surveys and intensive studies of the
   period, major movements, and artists of the time.
   Prerequisite: ART 213 or permission of instructor.

416-4 Studies in 20th-Century Art
   General surveys and intensive studies of the
   period, major movements, and artists of the time.
   Prerequisite: ART 213 or permission of instructor.

417-4 Studies in Non-Western Art
   General surveys and intensive studies of periods,
   major movements, and artists in non-Western art.
   Prerequisite: ART 211 or permission of instructor.

428-4 Advanced Drawing
   Exploration of the structure and interrelationships
   of visual form in drawing, painting, and sculpture.
   Principal historical modes of drawing examined.
   Topics vary. Prerequisite: ART 328.

437-4 Advanced Expanded Media
   Development of personal concepts and aesthetic
   expression in media. Emphasis on individualized
   approach to media problems. Prerequisite: ART 337
   or permission of departmental advisor.

448-4 Advanced Painting
   Continued emphasis on pictorial organization with
   increased attention to the personal imagery of
   students. Prerequisite: ART 349 or permission of
   instructor.

458-4 Advanced Black-and-White Photography
   Development of personal concepts and aesthetic
   expression in photography. Emphasis on
   individualized approach to problems that arise
   from the work of students. Topics vary.
   Prerequisite: ART 358 or permission of instructor.

466-4 Advanced Printmaking—Relief
   Development of personalized concepts and
   individual aesthetic expression in printmaking.
   Topics vary. May be taken for letter grade or
   pass/unsatisfactory. Prerequisite: ART 366 or
   permission of the instructor.

467-4 Advanced Printmaking—Intaglio
   Development of personalized concepts and
   individual aesthetic expression in printmaking.
   Topics vary. Prerequisite: ART 367 or permission
   of instructor.

468-4 Advanced Printmaking—Lithography
   Development of personalized concepts and
   individual aesthetic expression in printmaking.
   Topics vary. Prerequisite: ART 368 or permission
   of instructor.

469-4 Advanced Printmaking—Screenprinting
   Development of personalized concepts and
   individual aesthetic expression in printmaking.
   Topics vary. Prerequisite: ART 369 or permission
   of instructor.

478-4 Advanced Sculpture
   Further development of personal concepts and
   aesthetic expression in sculpture. Emphasis on
   individualized approach to sculptural problems
   using media selected by the students. Titles vary.
   Prerequisite: Three different intermediate sculpture
   courses or permission of instructor.

497-4 Advanced Museology
   Classroom and supervised practical work in art
   gallery and museum management. Prerequisite:
   ART 397 or permission of instructor.

Art Education/AED

Note: See quarterly class schedule or departmental
advisor for further enrollment restrictions,
requirements, or special course information.

224-2 Ceramics I
   Rudiments of ceramic design; methods of forming,
   wheel throwing, firing, glazing, and decoration.
   Emphasizes ceramic techniques and procedures
   applicable to public school art programs.

225-4 Ceramics II
   Advanced ceramic design, forming, wheel
   throwing, glaze calculations, and decoration.
   Includes a high degree of experimental
   involvement. Emphasizes advanced ceramic
   techniques and procedures applicable to public
   school art programs. Prerequisite: AED 224
   or permission of instructor.

370-1 to 3 Independent Study
   Planned readings, project, participation/observation
   clinic experiences, or other
   appropriate study on an independent basis.
438-4 Art Methods for Schools
Develops an understanding of the needs of children involved in art activities; study of elementary and secondary teaching techniques, materials, and curriculum organization. In-field work prior to student teaching. Reading components and teaching strategies included. Prerequisite: AED 431, 432; ED 214, 216, 218, 220; or equivalent. Corequisite: ED 323.

441-4 Art Appreciation and Criticism in the School
Understanding influences and interaction of the creative arts in our present culture. Emphasis on importance of developing appreciation in the public school. Study of processes inherent in aesthetic criticism and their relationship to teaching in the arts.

442-3 Advanced Problems in Art Education
Concentrated and advanced work with specific art media such as ceramics, metals, and fabrics. Emphasis on creative work and methods of teaching advanced procedures applicable to the public school art room.

444-3 Art and the Special Child
Experiences to help those who work with handicapped/disabled students to become aware of creative philosophy, art media, and therapeutic procedures. Approaches in creative activity included. Prerequisite: AED 431 or permission of instructor.

Art Therapy/AT
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

370-1 to 3 Independent Study in Art Therapy
Planned readings, project, participation/observation clinic experiences, or other appropriate study on an independent basis. Work is supervised by an art therapy faculty member. Graded pass/unsatisfactory.

429-1 to 6 Workshop in Art Therapy
Focuses on problems, processes, and techniques for the development of art therapy in special settings with diverse populations. Work in art media, assessment strategies, and treatment plans included. Discussion of implementation procedures with populations.

Athletic Training/ATR
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

261-4 Athletic Training I
Introductory course to the field of athletic training. Three hours lecture, two hours lab.
262-3 Athletic Emergency Care
The recognition and management of athletic emergencies will be emphasized. The relationships of other allied health care providers in similar situations will also be discussed and studied.
Prerequisite: ATR 261.

284-1 to 15 A. T. Practicum I: Care of the Physically Active
Supervised field work for sophomore students who are seeking certification or a concentration in a specific area. Titles vary. Contact hours vary according to subject. May be taken for letter grade or pass/unsatisfactory. Practicum must be in area of physical education concentration.

285-3 Rehabilitation Protocols
This is the second practicum in a series of nine to meet the competencies of athletic training. The emphasis will be on emergency situations and appropriate protocols of care. Prerequisite: ATR 261.

286-3 Emergency Protocols
This is the third practicum in a series of nine to meet the competencies of athletic training. The emphasis will be on emergency situations and appropriate protocols of care. Prerequisite: ATR 261.

303-3 Therapeutic Exercise
Methods of evaluating students and design of individual exercise programs for students with temporary or permanent physical limitations.
Prerequisite: HPR 212. (Previously listed as HPR 303.)

360-3 Therapeutic Modalities in Athletic Training
The study and practical application of therapeutic modalities for the treatment of athletic injuries. Modalities may include superficial heat and cold, hydrotherapy, massage, traction, intermittent compression units, ultrasound, electrostimulation, and microwave and shortwave diathermy. Prerequisite: HPR 261. (Previously listed as HPR 360.)

361-4 Athletic Training II
Second course in a series of three to cover the principles of athletic training.
Prerequisite: ATR 261, 262, 284, 285, 286, 303.

384-1 to 15 A. T. Practicum IV: Lower Body Assessment Lab
Supervised field work for junior students seeking certification or a concentration in a specific area. Topics vary. Contact hours vary according to subject. May be taken for letter grade or pass/unsatisfactory. Practicum must be in area of physical education concentration.

385-3 Upper Body Assessment
This is the fifth practicum in a series of nine to meet the competencies of athletic training. The emphasis will be on evaluation of injuries/conditions of the upper body. Prerequisite: ATR 261, HPR 250, and HPR 251.

386-3 Treatments and Protocols
This is the sixth practicum in a series of nine to meet the competencies of athletic training. The emphasis will be on treatment protocols for injuries/conditions to the physically active. Limited to students in the ATR program.
Prerequisite: ATR 261, 303, 361, 384, and 385. Must be taken with ATR 360.

460-4 Athletic Training III
Advanced problems found in the identification of injuries related to athletic participation.
Prerequisite: HPR 261. (Previously listed as HPR 460.)

461-4 Organization and Administration of Athletic Training
Combines the knowledge of organization and administration and how it applies to the profession of athletic training.
Prerequisite: ATR 261.

484-1 to 15 A. T. Practicum VII: Clinical and Surgical Rotation
Supervised field work for senior students seeking certification or a concentration in a specific area. Titles vary. Contact hours vary according to subject. May be taken for letter grade or pass/unsatisfactory. Practicum must be in area of physical education concentration.

485-3 Advanced Rehabilitation
This is the seventh practicum in a series of nine to meet the competencies of athletic training. The emphasis will be on advanced rehabilitation programs. Limited to students in the ATR program.
Prerequisite: ATR 261, 303, 361, 384, and 385.

486-3 Case Studies in Athletic Training
This is the ninth practicum in a series of nine to meet the competencies of athletic training. The emphasis will be on case studies for injuries/conditions to the physically active. Limited to students in the ATR program. Prerequisite: ATR 261, 303, 361, 360, 262, and 461. Must be taken with ATR 460.

Aviation/AVI
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

100-2 Aviation Career Institute
This course is designed for students attending the WSU Summer Aviation Career Institute. Students will explore over 50 careers in aerospace: from airline pilot to aircraft engineer, from air traffic controller to avionics technician. Limited to 10th, 11th, and 12th grade students enrolled in WSU's Summer Aviation Career Institute. Graded pass/unsatisfactory.
201-4 Private Pilot Ground Education
Forty hours of ground instruction covering radio navigation, meteorology, FAA regulations, communications, aircraft construction, and performance data to meet requirements of private pilot's written examination.

202-3 Private Pilot Flight Training I
Eighteen hours of flight training and related lectures including primary flight maneuvers and cross country flying. Includes a one-hour per week ground school seminar at the airport. Graded pass/unsatisfactory. Prerequisite: AVI 201 or FAA written exam.

203-2 Private Pilot Flight Training II
Seventeen hours of flight training plus a one-hour flight check. Meets requirements for private pilot's certificate. Graded pass/unsatisfactory. Prerequisite: AVI 202.

301-3 Meteorology In Aviation
Meteorology theory and pilot services available for the instrument-rated pilot. Meets FAA requirements.

302-4 Instrument Ground Training
Altitude instrument interpretation and aircraft performance, approaches and procedures, and IFR regulations and flight training. Meets FAA requirements. Prerequisite: AVI 301.

303-2 Instrument Flight Training I
Four hours simulator and 13 hours flight training with 17 hours of related instruction. Meets FAA requirements. Laboratory fee required. Graded pass/unsatisfactory. Prerequisite: AVI 302.

304-2 Instrument Flight Training II
Two hours simulator and 16 hours flight training with 18 hours of related instruction and a one-hour FAA exam. Meets FAA requirements. Laboratory fee required. Graded pass/unsatisfactory. Prerequisite: AVI 303.

488-1 to 6 Independent Study
Independent reading, writing, flying, and/or reporting in areas related to aviation. Topics vary. Departmental permission required.

Biochemistry and Molecular Biology/BMB

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

210-4 Introductory Biochemistry and Nutrition
Current topics in biochemistry, molecular biology, and nutrition for nonscience majors. Includes the relationship between diet and disease, mechanisms of cancer induction, hereditary and infectious disease, and applications of biotechnology that impact medicine and our daily life. No previous background in science is required.

250-4 Human Nutrition
Nutrition as an integrated science emphasizing biochemical and physiological principles. Topics include nutritional energetics, specific nutrients, and nutrition and physiology. Relation of basic concepts to clinical situations and to nutritional management of specific disease conditions. Prerequisite: BIO 105, CHM 102; or equivalent.

401-4 Topics in Biochemistry

421-4 Biochemistry I
Chemistry of biological compounds and introduction to enzymes.

423-4 Biochemistry II
Intermediary metabolism of carbohydrates, proteins, nucleic acids, and lipids. Prerequisite: BMB 421.

427-4 Human Biochemistry
Metabolism of hormones and amino acids, integration of metabolism, and aspects of human biochemistry including some metabolic disorders and nutrition. Prerequisite: BMB 421/423 or permission of instructor.

488-1 Independent Reading

495-1 to 5 Honors Research in Biochemistry
Laboratory experience in biochemistry. May be taken for letter grade or pass/unsatisfactory. Prerequisite: General chemistry and biology. Pre- or corequisite: BMB 421, 423.

499-1 to 4 Undergraduate Research
May be taken for letter grade or pass/unsatisfactory.

Biological Sciences/BIO

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

105-4 Introductory Biology: Food
Biological principles applied to the nature of food, its production, and use in the human body. Topics include molecular biology, photosynthesis, respiration, digestion, nutrition, agricultural ecosystems, and issues of feeding a rapidly growing human population. Three hours lecture, two hours lab.

106-4 Introductory Biology: Biodiversity
Biological principles and processes applied to the origin, interaction, and extinction of species. Laboratory and lab topics include paleobiology, speciation, macroevolution, adaptive radiation, symbiosis, biogeography, and the scientific management of modern biological resources. Three hours lecture, two hours lab.
107-4 Introductory Biology: Disease
Biological principles applied to the study of disease: causes, controls, and natural defense against infection. Topics include microscopy, pathology, antibiotics, immunology, and epidemiology with historical perspectives and an emphasis on investigative techniques. Three hours lecture, two hours lab. Prerequisite: BIO 106.

112-4 Principles of Biology: Cell Biology and Genetics
Introduction to basic concepts of biology. Topics include genetics and the molecular and cellular basis for the unity of life. Three hours lecture, two hours lab.

114-4 Organismic Biology
Introduction to the structure and function of plants and animals. Three hours lecture, two hours lab. Prerequisite: BIO 112.

115-4 Principles of Biology: Diversity and Ecology
Introduction to basic concepts of biology. Topics include evolution, ecology, and the diversity of life. Three hours lecture, two hours lab. Prerequisite: BIO 112.

119-1 Honors Recitation, Principles of Biology (112, 114, 115)
Recitation/discussion section to review basic concepts developed in the laboratory. Co-registration in lecture and honors laboratory required.

194-1 Introduction to Exercise Science
An introduction to the research literature and to the fields of study within the discipline of exercise science.

199-1 Introduction to Biological Investigation
For individually motivated students at the introductory level who wish to pursue some particular project under faculty supervision. Graded pass/unsatisfactory.

201-1 to 3 Topics in Biology
Selected biological topics of current interest.

210-4 Molecular Biology
Emphasizes understanding of the chemical and physical aspects of molecular interactions and the flow of genetic information from DNA to protein. Prerequisite: BIO 112, 114, 115; CHM 121, 122, 123.

211-4 Molecular Genetics
Emphasizes understanding of the control of gene expression in both prokaryotes and eukaryotes. Includes study of chromosome structure, replication, recombination, and repair. Prerequisite: BIO 112, 114, 115, 210; CHM 121, 122, 123.

212-4 Cell Biology
Emphasizes eukaryotic cell structure and function, including energetics and involvement of various organelles. Prerequisite: BIO 112, 114, 115, 211; CHM 121, 122, 123.

221-4 Human Lifespan Motor Development
Study of somatic and physiological changes and their influence on human motor development across the lifespan.

252-5 Microbiology
Study of morphology, cultivation, and biochemical activities of microorganisms. Survey of viruses, bacteria, blue-green algae, fungi, and their diversity in natural environments. Three hours lecture, four hours lab. Prerequisite: one year introductory biology.

253-5 Biology of Lower Plants
Study of morphology, taxonomy, and ecology of algae, fungi, and bryophytes. Emphasis on growth and developmental patterns, modes of reproduction, importance to humans and to ecosystems, diversity, distribution, and phylogenetic relationships. Two hours lecture, six hours lab. Prerequisite: one year introductory biology.

254-5 Biology of Vascular Plants
Study of form, development, reproduction, and life histories of vascular plants. Survey of representative plant families emphasizing phylogenetic relationships, distribution, and vegetational types in natural habitats. Two hours lecture, six hours lab. Prerequisite: one year introductory biology.

255-5 Biology of the Invertebrates
Morphology, development, physiology, and evolutionary relationships of major invertebrate groups. Three hours lecture, four hours lab. Prerequisite: one year introductory biology.

256-5 Biology of the Vertebrates
Introduction to the anatomy and evolutionary history of vertebrate animals. Three hours lecture, four hours lab. Prerequisite: BIO 112, 114, 115.

266-2 Practicum in Exercise Science
Designed to involve exercise science students in a first level practicum experience. Experiences include fitness centers, fitness assessment, anthropometry, and laboratory/research assistant. Sophomore standing. Prerequisite: BIO 194.

267-2 Practicum in Exercise Science
Designed to involve exercise science students in a continuation of their first level of field experience during their sophomore year. This experience involves one or more of the following: fitness center placement, fitness assessment, anthropometry, and laboratory assistant/research assistant. Prerequisite: BIO 266.

278-4.5 Anatomy and Physiology I
Lecture topics in human anatomy and physiology, including tissues; skeletal, muscular, nervous, and endocrine systems. Laboratory features cat dissection and physiological techniques complementary to the lecture topics. Prerequisite: BIO 112.
294-1 Introduction to Medical Technology
Familiarizes students with the medical-technology profession and the educational programs required to become a medical technologist.

302-4 Genetics
The nature and function of genetic material with emphasis on transmission and population genetics. Exceptions to and extensions of Mendelian analysis, gene mapping, quantitative genetics, and the change of gene frequencies with time. Three hours lecture, one hour recitation. Prerequisite: BIO 278.

303-5 Vertebrate Histology
Study of structure/function relationships in vertebrate tissues, organs, and organ systems. Three hours lecture, four hours lab. Prerequisite: at least one 200-level or above biology course; CHM 211; or permission of instructor.

304-5 Animal Physiology Laboratory
Special aspects of plant physiology that set plants apart from other organisms. Laboratory introduces independent research concerning plant nutrition and bud development. Three hours lecture, four hours lab. Prerequisite: BIO 253 or 254; CHM 123.

305-3 Animal Physiology
Basic adaptive mechanisms and their coordination in the activities of the metazoa. Prerequisite: one year introductory biology; and BIO 255 or 256.

306-5 Ecology
Introduction to ecology; emphasis on the organism’s interaction with the environment. Three hours lecture, four hours lab. Prerequisite: one year introductory biology.

308-2 Animal Physiology Laboratory
Laboratory studies of basic adaptive mechanisms and their coordination in the activities of the metazoa. Prerequisite: BIO 112, 115; and BIO 255 or 256.

310-3 Issues in Science
(Also listed as CHM 310, PHY 310, MTH 310, and GL 310.) A writing-intensive course dealing with issues in science. Prerequisite: ENG 101, 102; a first-year science course.

345-4.5 Concepts in Biology
An accelerated treatment of fundamental concepts and applications of biology for Elementary Education majors. Topics and activities organized specifically to prepare students for science teaching at levels K–8. For elementary education majors only. Integrated lecture/lab. Prerequisite: PHY 245; CHM 245.

352-4 Human Biomechanics
An analysis of muscular interrelationships in basic body movements and an analysis of principles of mechanics as they relate to fundamental and complex motor skills. Prerequisite: BIO 278 and 279 or ANT 201 and 202 or equivalent.

353-4 Exercise Physiology I
Physiological adjustments and changes occurring in the human organism as a result of homeostatic challenges. Prerequisite: BIO 279 or equivalent.

354-4 Exercise Physiology II
Exercise physiology as it is applied to fitness and performance. Programs that distinguish between health-related fitness and physiology of maximal performance will be discussed. Prerequisite: BIO 279, 353.

360-4 Exercise Prescription
Study of exercise program design and implementation involving apparently healthy individuals, those at higher risk, and those with controlled disease. Emphasis is placed on cardiorespiratory and neuromuscular exercise prescription and implementation. Prerequisite: BIO 353, BIO 456.

366-2 Practicum in Exercise Science
Designed to involve exercise science students in a continuation of their practicum experience. Experiences include: sports medicine centers, EKG/advanced fitness assessment, and laboratory/research assistant. Junior standing. Prerequisite: BIO 267.

367-2 Practicum in Exercise Science
Designed to involve exercise science students in a continuation of their practicum experience. Experiences include: sports medicine centers, EKG/advanced fitness assessment, and laboratory/research assistant. Junior standing. Prerequisite: BIO 366.

399-1 Undergraduate Teaching Assistant
Supervised experience in preparing materials and apparatus for laboratory sessions in the biological sciences. Students will work with course staff on a regularly scheduled basis to develop the practices and skills associated with laboratory teaching responsibility and assist course staff in teaching the laboratory. May be repeated for up to three credits. Graded pass/unsatisfactory. Prerequisite: junior standing and GPA of 3.0.

401-1 to 3 Topics in Modern Biology
Advanced topics in modern biology of current interest. Topics vary.

403-5 Developmental Biology
Describes underlying processes that initiate, in plants and animals, the development of tissues and the whole organism. Laboratory exercises highlight developmental processes. Three hours lecture, four hours lab. Prerequisite: BIO 115, 212.
404-6 Basic Electron Microscopy
Basic theory and practical experience in transmission electron microscopic technology. Animal, plant, and particulate specimens are processed in the laboratory. Prerequisite: BIO 303 or 212, completion of chemistry requirement, and permission of instructor.

406-3 Evolutionary Biology
Historical development and current understanding of the principles of evolution. Prerequisite: BIO 112, 114, 115, 212. Junior standing required.

407-5 Wetlands Biology
Ecological investigation of wetlands of United States, with emphasis on Midwest. Primarily field oriented and some lecture. Covers soils, vegetation, hydrology, conservation, and restoration. Requires two weekend trips and written report. Prerequisite: junior or senior standing. CHM 121; one of the following: BIO 306, 254, 401, 411, GL 450; or relevant field experience.

408-3 Writing in the Biological Sciences
Surveys grammatical and stylistic aspects of scientific writing and teaches students how to organize, write, and submit a manuscript for publication in a biological journal. Writing grants will also be discussed. Prerequisite: one year introductory biology.

410-4 Cell-Molecular Biology Laboratory
Introduction to methods used in cell biology for isolating and detecting intracellular components and in molecular biology for manipulating DNA. Prerequisite: BIO 210, 211, 212; CHM 211, 212, 213.

411-6 The Aquatic Environment
Introduction to limnology. Field and laboratory course concerned with physical, chemical, and biological factors that characterize natural waters.

413-5 Biological Problems of Water Pollution
Introduction to biological aspects of water pollution. Lectures, discussions, laboratories, and field trips on various types of pollutants and their impact on aquatic life.

415-4 Environmental Toxicology
Covers toxicological problems encountered in the field of environmental health. Emphasis on monitoring, control, and regulation of toxic substances in air and water and in industrial environments. Completion of a course in physiology and in organic chemistry required.

420-3 Designing Biological Experiments
Principles of effective sampling design for biological experiments. Reconciling the peculiarities of biological data with the assumptions of statistical methods. Lectures and problem sets. Completion of two 300-level or above biology courses and one course in statistics required.

421-3 Human Genetics for Health Professionals
Describes mechanism of inheritance and genetic diseases so that health professionals can recognize possible genetic abnormalities and make appropriate referrals, participate in genetic counseling, and consider ethical and legal implications of the “new genetics.” For nonmajors only. Prerequisite: BIO 112 or equivalent.

425-5 Microbial Ecology
Microbes in soil, water, and air. Experiments on mineral cycles, physical and biological limiting factors, and environments. Includes field studies. Prerequisite: CHM 123.

426-4 Human Genetics
Nature of human genetic traits, methods of analysis of inheritance. Prerequisite: BIO 302.

429-5 Plant Anatomy
Examines the internal structure of vascular plants. Special emphasis is placed on structure-function relations and their adaptive significance. Prerequisite: one year introductory biology.

437-6 Recombinant DNA Methods
(Also listed as BMS 790, BIO 737, M&I 437. Not listed as M&I 737.) Microbial and molecular techniques for producing, cloning, and characterizing recombinant DNA molecules. Laboratory exercises in gene manipulation give an understanding of the principles of genetic engineering. Prerequisite: BIO 210, 211, 410.

442-3 Advanced Molecular Biology
Topics emphasizing gene organization and genome organization will center on the molecular anatomy, expression, and regulation of eukaryotic genes. Includes a thorough discussion of recombinant DNA technology. Prerequisite: BIO 210, 211, 212, 410; CHM 211, 212, 213.

451-4 Motor Learning and Control
Study of the factors that influence the acquisition and control of human movement.

456-4 Measurement and Evaluation in Exercise Science
The identification, administration, and evaluation of physiological and motor performance assessments. Prerequisite: BIO 221 and 353 (or taken concurrently).

460-3 Population Genetics
Examination of the causes of genetic differences within and among species and how molecular biology techniques can be used to identify these differences. Emphasizes human genetics, anthropology, ecology, and conservation implications. Prerequisite: BIO 210, 211, 212, and 302.

461-3 Molecular Evolution
Studies the evolutionary history of organisms by interpreting their genomes as historical documents. Focuses on the origins of human traits and diseases, phylogenetic reconstruction, and systematics. Prerequisite: BIO 210, 211, 212, and 302.
464-3 Microbiology of Food
Principles of food microbiology, preservation, and handling. Major organisms of food poisoning and means of control are considered. Completion of a course in microbiology required.

466-4 to 6 Practicum in Exercise Science
Designed to involve exercise science students in a culminating practicum experience in their field of study during their senior year. The experience involves work site training or a research project. Prerequisite: BIO 367.

473-5 Biology of Selected Marine Environments
Biological aspects of marine environments. Sampling and observation of living marine specimens during week-long trip to marine laboratory.

475-2 Microbiology of Food Laboratory
Methods for evaluating microbial quality of food. Includes investigation of major pathogens, and techniques and principles of processing food. Completion of a laboratory course in general microbiology required. Prerequisite: BIO 252 or M&I 220. Corequisite: BIO 464.

476-2 Human Parasitology
Study of aspects of parasitology including biology, epidemiology, diagnosis, and identification of parasites. Divided into three major categories: protozoology, helminthology, and arthropodology.

477-3 Human Parasitology Laboratory
Examination and identification of protozoan, helminthic, and arthropod parasites of humans. Corequisite: BIO 476.

480-3 Biology of Fishes
An introduction to the evolution, ecology, and distribution of freshwater and marine fishes. Prerequisite: junior standing required.

481-2 Biology of Fishes Lab
Anatomy and identification of freshwater and marine fishes with emphasis on local forms. Field trips required. Prerequisite: junior standing.

482-3 Exercise Sciences Senior Seminar
A culminating and in-depth synthesis of the research literature pertaining to the field of exercise science. Prerequisite: completion of Area B in exercise science track or instructor permission.

484-3 Biogeography
(Also listed as GEO 484.) Introduction to the factors affecting the distribution of plants and animals. Prerequisite: BIO 112, 115, and 306.

488-1 Independent Reading
Graded pass/unsatisfactory.

490-9 to 12 Biology Internship
Off-campus experience in cooperating scientific agency or industrial organization. Reports and specific assignments determined in consultation with faculty advisor and supervising professionals. Junior standing in biology and department approval required.

492-1 to 2 Senior Seminar
Literature survey, discussion, and oral presentations of selected topics in the biological sciences. Course requires written presentations when offered for two credits and one recitation.

495-1 to 5 Senior Honors Research

499-1 to 3 Special Problems in Biology

Biomedical Engineering/BME

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

155-4 Adaptive Computer Technology
Presented for physically impaired students for the purpose of familiarizing them with adaptive computer usage. It is structured to teach necessary skills related to each student's rehabilitative needs.

195-2 Fundamentals of Biomedical Engineering
This is an introduction to the study of Biomedical Engineering. The broad areas of BME are presented through lecture and demonstration. Department faculty provides interesting insights in their areas of expertise.

300-0 Honors Program Seminar
An orientation course intended for juniors who have demonstrated exceptional academic ability and desire to conduct meaningful independent research or solve unique engineering design projects during their senior year. Meets five times during quarters. Graded pass/unsatisfactory.

402-2 Biomedical Engineering Design II Laboratory
Design project teams will meet with their advisor(s) on a weekly basis to review progress, make assignments, and further involve students with design methods. Prerequisite: BME 440, 461, 491; concurrent enrollment in BME 492 is required.

403-2 Biomedical Engineering Design III Laboratory
Design project teams will meet with their advisor(s) on a weekly basis to review progress, make assignments, and further involve students with design methods. Prerequisite: BME 492; concurrent enrollment in BME 493 is required.

419-3 Biofluid Mechanics
Derivation and use of the basic conservation laws underlying the fluid mechanical behavior of the cardiopulmonary system. Includes applications to the flows of blood, pulmonary air, and extracorporeal fluids. Prerequisite: ME 212, 315, MTH 233.

420-3 Biomedical Heat and Mass Transfer
Introduction to transport phenomena in biomedical engineering and physiological systems. Energy and mass balances together with constitutive and empirical relationships are used in quantifying such topics as body heat loss by the various modes, diffusion mass transport, and heat/mass transport in applicable technological systems. Prerequisite: BME 419.
422-3 Engineering Biophysics
Application of mathematical and engineering techniques toward describing biophysical systems. Topics include cellular transport, electrical properties of membranes, and biophysics of muscle contraction. Prerequisite: EE 321 or permission of instructor.

428-3 Biomechanics and Biothermodynamics
Application of solid mechanics and thermodynamics toward describing physiological systems. Topics include mechanics of the skeletal, cardiac, and pulmonary systems, and analysis of the biothermal regulation system. Prerequisite: ME 212, 315 or permission of instructor.

439-3 Biotransport and Artificial Organs
Introduction to transport processes vital to the design of medical devices for artificial intervention into living systems. Topics include circulatory system dynamics, mathematical modeling of physiological systems, membrane transport, and biological/artificial organ design. Prerequisite: BME 420.

440-4 Biomaterials
Application of properties of materials and solid mechanics to problems and design of medical implants, external prostheses, and living tissues. Topics include mechanical properties of biologic and synthetic materials, stress-strain analysis, viscoelasticity, tissue response to implants and vice versa, and implant materials for interfacing with hard and soft tissues and blood. Prerequisite: ME 213, EE 321.

461-4 Bioinstrumentation I
Principles of design and analysis of electronic instrumentation for medical applications. Topics include various electrodes/transducers for physiological measurement, imaging modalities, systems, and electrical safety. Prerequisite: EE 401, 402, 413, 414.

462-4 Bioinstrumentation II
Continuation of principles of design and analysis of electronic instrumentation for medical applications. Topics include various electrodes/transducers for physiological measurement and electrical stimulation, biological signal acquisition and processing, various medical imaging modalities/systems, and electrical safety. Prerequisite: BME 461.

463-2 Biomedical Computers I
Digital computer applications in biomedical related fields. Use of software to solve biomedical problems and display the results. Prerequisite: CEG 220, EE 301.

464-4 Microprocessors for Biomedical Engineering
Principles, hardware structure, and programming techniques of microprocessors. Applications of microprocessor-based systems in hospitals, rehabilitation engineering, and medical research. Prerequisite: BME 463.

470-3 Photon Radiation
Basic introduction to generation, effects, and detection of ionizing radiation and its application to medicine. Successful completion of this course entitles students to be registered users of radioactive isotopes. Prerequisite: PHY 242, 244, BIO 279.

471-3 Medical Imaging
Overview of the various methods used in generating images in medicine. Basic principles of the image-forming process and the physical properties of the resultant image are discussed. Prerequisite: BME 470.

491-3 Biomedical Engineering Design I
Individualized design projects allowing students to make use of design and analytical skills. Prerequisite: BME 420, BME 464. Corequisite: BME 440, 461.

492-1 Biomedical Engineering Design II
Individualized design projects allowing students to use design and analytical skills. Prerequisite: BME 440, 461; concurrent enrollment in BME 402 is required.

493-3 Biomedical Engineering Design III
Individualized design projects allowing students to use design and analytical skills. Prerequisite: BME 492; concurrent enrollment in BME 403 is required.

499-1 to 5 Special Problems in Engineering
Special problems in advanced engineering topics. Topics vary.

Business/BUS

100-3 Horizons in Business
Covers the range of activities, challenges, opportunities, and career paths in the world of U.S. and global business. Includes an overview and introduction to such diverse areas as the economic setting, international business, the structure of business, management of American business, human resources, marketing, information systems, accounting, finance, and ethics in business.

Chemistry/CHM

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-4.5 Introduction to Chemistry
Historical approach to the fundamentals of chemistry; composition and structure, properties and transformations of matter. Three hours lecture, three hours lab.
102-4.5 Elementary Organic Chemistry with Applications
An elementary discussion of the structure of hydrocarbons, organic functional groups, and a few selected reactions. Three hours lecture, three hours lab. Prerequisite: CHM 101 or 121.

105-4 Chemistry of Our World: Living Things
Examination of the principles of covalent bonding, structures, and reactions of molecules important to living things, with attention to the technological, regulatory, and social complexities of problems related to them. Three hours lecture, two hours lab.

106-4 Chemistry of Our World: Materials
Examination of the bonding of metals and nonmetals to explain the nature of familiar materials of industrial importance. Attention to the risk/benefit implications of these materials and technologies for consumers. Three hours lecture, three hours lab. Prerequisite: three units of high-school science or equivalent; or CHM 101; or CHM 105.

107-4 Chemistry of Our World: Energy and the Environment
Examination of gaseous and liquid states and thermochemistry as a basis for understanding air and water quality and fossil and nuclear fuels. Attention to the chemistry of the solar system. Three hours lecture, two hours lab. Prerequisite: three units of high school science or equivalent; or CHM 101; or CHM 106.

121-5 Submicroscopic Chemistry
Structure and properties of atoms and molecules and the macroscopic consequences thereof. Three hours lecture, three hours lab, one hour recitation. Prerequisite: High school chemistry or CHM 101; and MTH 127 or level four on math placement test.

122-5 Macroscopic Chemistry
Physical and chemical behavior of large collections of atoms and molecules. Three hours lecture, three hours lab, one hour recitation. Prerequisite: CHM 121.

123-5 Reaction Dynamics
Quantitative aspects of chemistry; emphasis on computational and experimental estimation of the composition of chemical systems. Three hours lecture, three hours lab, one hour recitation. Prerequisite: CHM 122; MTH 128 or 129 or level five on math placement test.

191-5 Modern General Chemistry I: Organic
Organic chemistry with its applications is presented with fundamental chemical concepts introduced as they are necessary to explain the subject. Prerequisite: High school chemistry or CHM 101; and MTH 127 or level four on math placement test.

192-5 Modern General Chemistry II: Materials
Useful materials are presented from a chemical point of view with fundamental concepts introduced as needed. Prerequisite: CHM 191.

193-5 Modern General Chemistry III: Energy
The relationships between energy and matter are explored with fundamental chemical concepts introduced as needed. Prerequisite: CHM 192 and MTH 128 or 129 or level five on math placement test.

211-4, Organic Chemistry
Principles, theories, and applications of the chemistry of carbon compounds. Three hours lecture, one hour recitation. Prerequisite: for 211, CHM 123.

212-4 Organic Chemistry
Principles, theories, and applications of the chemistry of carbon compounds. Three hours lecture, one hour recitation. Prerequisite: for 212, CHM 211.

213-4 Organic Chemistry
Principles, theories, and applications of the chemistry of carbon compounds. Three hours lecture, one hour recitation. Prerequisite: for 213, CHM 217.

215-2 Organic Chemistry Laboratory I
Laboratory illustrations of CHM 211 lecture material and techniques of preparative organic chemistry. Prerequisite: CHM 123, Corequisite: CHM 211.

216-2 Organic Chemistry Laboratory II
Laboratory illustrations of CHM 212 lecture material and techniques of preparative organic chemistry. Prerequisite: CHM 215. Corequisite: CHM 212.

217-2 Organic Chemistry Laboratory III
Laboratory illustrations of CHM 213 lecture material and techniques of preparative organic chemistry. Prerequisite: CHM 216. Corequisite: CHM 213.

245-4.5 Concepts in Chemistry I
An accelerated treatment of fundamental concepts and applications of chemistry for elementary education majors. Those concrete observable topics most appropriate for presentation to elementary and middle school students will be emphasized. Demonstrations and activities are used extensively. For elementary education majors. Integrated lecture/lab. Prerequisite: MTH 143.

302-4 Environmental Chemistry
(Also listed as CHM 502.) Water, air, and soil chemistry including pollutants added to these environments and how they interact to create environmental problems. Three hours lecture, three hours lab. Prerequisite: CHM 123 or 193.

310-3 Issues in Science
(Also listed as BIO 310, PHY 310, MTH 310, and GL 310.) A writing-intensive course dealing with issues in science. Prerequisite: ENG 101, 102; a first-year science course.
312-3 Quantitative Analysis
Introduction to chemical methods of analysis covering traditional as well as modern techniques and equipment; emphasis on calculations and the interpretation of analytical data. Prerequisite: CHM 123. Corequisite: CHM 314.

314-4.5 Quantitative Analysis Laboratory
Experimental methods of analysis. Practical applications of lecture material presented in CHM 312. Prerequisite: CHM 123. Corequisite: CHM 312.

345-4.5 Concepts in Chemistry II
Based on National Science Education Standards. Topics include: periodic table, chemical reactions, thermochemistry, organic and nuclear chemistry with everyday examples. Inquiry-based activities including historical and societal perspectives. For middle education majors pursuing science concentration. Integrated lecture/lab. Prerequisites: MTH 244, CHM 245, and PHY 245.

361-4 The Organic Chemistry of Engineering Materials
Molecular structure, stereochemistry, properties, and reactivities of selected organic substances of industrial importance, including fuels, lubricants, solvents, coatings, plastics, dyes, and naturally occurring engineering materials. Not open to students with credit for CHM 212. Prerequisite: CHM 122.

402-4 Advanced Environmental Chemistry and Analysis
(Also listed as CHM 602.) Environmental sampling and analysis using instrumental techniques. Chemical fate prediction by measurement and examination of physical and chemical properties. Three hours lecture, three hours lab. Prerequisites: CHM 312/314 and 213; or permission of instructor.

410-3.5 Environmental Chemistry I: Air
Study of the Earth's atmosphere including its normal composition and atmospheric reactions; emphasis on nature, causes, effects, detection, and abatement of various types of air pollution. Two hours lecture, three hours lab, or field project. Prerequisite: CHM 213, 312; or permission of instructor.

411-3.5 Environmental Chemistry II: Water
Study of the Earth's fresh and saline water including its normal composition and aquatic reactions; emphasis on nature, causes, effects, detection, and abatement of various types of water pollution. Two hours lecture, three hours lab or field project. Prerequisite: CHM 213, 312; or permission of instructor.

412-3.5 Environmental Chemistry III: Solids
A survey of the problems of solid wastes, pesticides, food additives, and radioactive materials including their chemical composition, effects, detection, disposal, and natural breakdown. Three hours lecture, one hour lab or field project. Prerequisite: CHM 213, 312; or corequisite CHM 416.

437-3 Applied Chemical Spectroscopy
The practical applications of various spectrophotometrical techniques (mass spectroscopy, infrared spectroscopy, ultraviolet spectroscopy, and nuclear magnetic resonance) are integrated for the elucidation of the structure of organic molecules. A problem-solving approach is used. Prerequisite: CHM 213, 312, 452 or permission of instructor.

439-3 Chemical Literature and Composition
Literature searching of journals, handbooks, abstracts, and patents. Writing of literature reports, abstracts, papers, and reports. Three lectures. Prerequisite: CHM 212, 451.

440-3 Inorganic Chemistry
Principles and concepts of inorganic chemistry including the periodic table, atomic structure, chemical bonding, coordination compounds, and an introduction to group theory. Prerequisite: CHM 453 or permission of instructor.

442-3 Inorganic Chemistry
Principles and concepts of inorganic chemistry including the periodic table, atomic structure, chemical bonding, coordination compounds, and an introduction to group theory. Prerequisite: CHM 453 or permission of instructor.

445-3 Advanced Inorganic Synthesis and Characterization
Advanced synthesis and characterization of representative inorganic compounds. Prerequisite: CHM 417, 420 or permission of instructor.

435-3 Instrumental Analysis
Introduction to the theory and practice of modern chemical instrumentation. Elementary electronics, spectrophotometry, atomic absorption, electrochemical techniques, chromatography, and other instrumental techniques. Prerequisite: CHM 312, 452. Corequisite: CHM 436.

436-4.5 Instrumental Analysis Laboratory
Introduction to experimental instrumental analysis. Practical experience in the operation of chemical instrumentation; emphasizes applications of material presented in CHM 435. Prerequisite: CHM 312, 452. Corequisite: CHM 435.

440-3 Synthetic Medicinal Chemistry I
Covers various chemical aspects of drugs including synthetic design, mode of action, and uses of various pharmaceuticals. Topics include cardiovascular agents, antibiotics, anti-tumor agents, and central nervous system drugs. Prerequisite: CHM 213.

441-3 Synthetic Medicinal Chemistry II
Covers various chemical aspects of drugs including synthetic design, mode of action, and uses of various pharmaceuticals. Topics include cardiovascular agents, antibiotics, anti-tumor agents, and central nervous system drugs. Prerequisite: CHM 213.
443-3 Chemical Toxicology I
Study of the basic principles of chemical toxicology. Chemicals that have the greatest incidence of abuse are discussed in detail with regard to their chemical-biological interactions, symptomatology of toxicity, clinical chemistry tests, and treatment. Prerequisite: CHM 213, 312.

444-3 Chemical Toxicology II
Study of the basic principles of chemical toxicology. Chemicals that have the greatest incidence of abuse are discussed in detail with regard to their chemical-biological interactions, symptomatology of toxicity, clinical chemistry tests, and treatment. Prerequisite: CHM 213, 312.

445-3 Advanced Organic Synthesis and Characterization
Advanced synthesis and identification of organic compounds. One hour lecture, four hours lab. Prerequisite: CHM 213, 217, 417.

451-3 Physical Chemistry
Theoretical aspects of chemistry including thermodynamics, chemical kinetics, molecular structure and spectra, and the structure of solids and liquids. Prerequisite: CHM 128, MTH 231, and PHY 242 or 113.

452-3 Physical Chemistry
Theoretical aspects of chemistry including thermodynamics, chemical kinetics, molecular structure and spectra, and the structure of solids and liquids. Prerequisite: CHM 451, or permission of instructor.

453-3 Physical Chemistry
Theoretical aspects of chemistry including thermodynamics, chemical kinetics, molecular structure and spectra, and the structure of solids and liquids. Prerequisite: CHM 452, or permission of instructor.

457-3 Physical Chemistry Laboratory I
Experimental methods of physical chemistry. Prerequisite: CHM 312, 314, Corequisite: CHM 452.

458-3 Physical Chemistry Laboratory II
Experimental methods of physical chemistry. Prerequisite: CHM 457. Corequisite: CHM 453.

461-3 Synthetic Polymer Chemistry
Step-growth and chain-growth polymerization in homogeneous and heterogeneous media; properties of commercial polymers. Prerequisite: CHM 213 and 451; or CHM 361; or permission of instructor.

465-3 Physical Polymer Chemistry
Introduction to the structural and physical aspects of macromolecules; emphasis on the relationship of polymer structure to physical and mechanical properties. Prerequisite: CHM 213 and 451; or 361; or permission of instructor. Corequisite: CHM 467.

467-1 to 2 Physical Polymer Chemistry Laboratory
Laboratory illustrations of CHM 465 lecture material and techniques of polymer science. Corequisite: CHM 465.

468-1 to 2 Polymer Synthesis Laboratory
Laboratory illustrations of CHM 461 lecture material and techniques of polymer science. Pre- or corequisite: CHM 461.

469-4 Engineering Plastics: Materials, Processes, and Design
(Also listed as ME 489.) Properties and manufacturing processes of engineering plastics, and effects of these factors on plastics design. Illustrative laboratory projects are included. Two hours lecture, four hours lab. Prerequisite: CHM 465.

479-4 Materials Corrosion
(Also listed as ME 479.) Survey of principles of corrosion processes with application to metallic and nonmetallic materials. Principles of electrochemistry are included. Prerequisite: ME 315, 371, or corequisite CHM 453, or permission of instructor.

488-1 to 3 Independent Reading

499-1 to 5 Special Problems in Chemistry

Chinese/CHI

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

111-4 Essentials of Chinese
Introduction to Chinese with emphasis on speaking the language.

Classics/CLS

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

Courses under this heading do not require knowledge of Greek or Latin.

100-4 Latin and Greek Roots in English
Builds English vocabulary through a study of Latin and Greek roots. Emphasis on words used commonly in higher education rather than on specialized terminology.

101-4 Medical and Scientific Terminology
Spelling, recognition, and understanding contemporary specialized medical and scientific vocabulary that is based on the Latin and Greek languages. Emphasis on terminology of the medical sciences.
150-3 Greek and Roman Culture
Survey of the development of classical culture from prehistoric Greece to the fall of the Roman Empire. A broad view of the interrelated political, economic, and social conditions, and philosophy, religion, mythology, literature, art, and architecture.

160-3 Introduction to Classical Mythology
Survey of the myths and legends of ancient Greece and Rome that are an important part of the Western literary and cultural tradition. Emphasis on story patterns and characters.

CLS 150 is strongly recommended, but not required, as a prerequisite for all advanced courses.

300-4 How We Know about Antiquity
How do we know what we think we know about classical antiquity? Study of the different types of evidence and of ways in which this evidence is analyzed, handled, and interpreted by scholars.

310-4 The Golden Age of Greece
Greek experience in fifth and fourth centuries B.C. with emphasis on Athenian democracy and the Golden Age of Athens: drama, history, oratory, and philosophy.

320-4 Rome: Republic and Empire
Emphasis on late republic and early empire, particularly the Augustan age. The idealism of Virgil and Lucretius; the realism of Cicero, Seneca, and Tacitus.

The following courses offer a variety of topics; they may be repeated for credit by number, although not by content. Students should consult the department for the scheduled subjects.

330-4 Studies in Ancient Literature
Drama, epic, and lyric poetry; prose; selected themes in ancient literature; and literary criticism.

340-4 Studies in Ancient Art and Archaeology
(Also listed as ART 411.) Greece in the Bronze Age; classical Greece and Rome; and selected areas of Greek and Roman archaeology.

350-4 Studies in Ancient Culture and Society
Greek and Roman civilization with evidence from art, literature, archaeology, law, and other sources.

360-4 Studies in Ancient Mythology
Greek and Roman mythology; aspects and approaches to the study of myths; and archaeological and nonliterary sources.

370-4 Studies in Ancient Law, Government, and Politics
Law and legal systems of Greece and Rome; government and administration; and political problems of the ancient world.

399-1 to 4 Studies in Selected Subjects
Course of variable content dealing with problems, approaches, and topics in the field of classics.

481-4 Independent Reading
Directed studies in literature, mythology, archaeology, law, and government. For classical humanities majors only.

499-2 Senior Comprehensive Review
Required of majors in the classics, Greek, or Latin. Independent study and review leading to comprehensive examination based on the course work undertaken by each individual student. For classics, Greek, or Latin majors only.

Communication/COM

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-3 Essentials of Public Address
Fundamentals of verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of a speech.

102-3 Essentials of Interpersonal Communication
Introduction to interpersonal communication processes as they affect communication style and competence. Emphasis on a holistic approach to communication by understanding concepts, analyzing experiences, and practicing new skills.

103-3 Communication for Teachers
Examination of types of communication in the classroom. Principles and practice of oral and written communication in story-telling, lecturing, discussion, and interpersonal communication. For elementary education majors only.

111-3 Oral Interpretation
Introduction to the oral experience of literature. Theory and technique of oral reading. Frequent performances by students.

130-1 Introduction to Communication Activities
Research, practice, and participation in communication forums, symposia, or an oral communication project designed to meet the interest of individual students. Independent study. Graded pass/unsatisfactory.

133-2 Parliamentary Procedure
Theory and practice in parliamentary procedure, including an examination of principal motions, constructing a constitution, managing a meeting, and major parliamentary law cases.

141-3 Small-Group Communication
Theory and practice in small-group communication with projects in definition, analysis, research, organization, logical processes, and leadership. Prerequisite: COM 102.
200-4 Writing to Communicate
Instruction and practice in writing to inform and persuade, emphasizing analysis of purpose, strategy, organization, style, and correct language. Instruction in use of information sources, including computer-linked data bases. Communication majors only.

221-3 Voice and Articulation
Theory and practice of voice and articulation effectiveness.

232-3 Argumentation and Debate
Projects in analysis, research, briefing, ordering of arguments and evidence, refutation, audience evaluation, argumentative composition, and delivery. Prerequisite: COM 101 or permission of instructor.

253-3 Basic Video Production
(Also listed as TH 253.) A basic introduction to the use of video production equipment using lecture, demonstration, and experiential approaches. Appropriate laboratory time provided in television studio. Prerequisite: COM 152 or permission of instructor.

256-4 Basic Media Writing
(Also listed as ENG 257.) Introduction to writing for media. Structure and organization of media copy. Course requires reporting in the field. Prerequisite: COM 152 and permission of instructor.

325-4 Health Communication
Examination of the basic themes and issues that have developed in health communication research including physician-patient and nurse-patient communications, organizational communication in health care organizations, and relationships among care providers.

330-1 Advanced Communication Activities
Research, practice, and participation in communication forums, symposia, or an oral communication project designed to meet the interest of individual students. Independent study. Graded pass/unsatisfactory.

333-4 Persuasion

335-4 Survey of Rhetorical Theory
Overview of general rhetorical theory from classical Greek and Roman foundations to modern rhetoric. Emphasis on selected works of scholars and rhetoricians. Prerequisite: COM 101 or permission of instructor.

340-4 Effective Listening
Development of listening skills for discriminative, comprehensive, therapeutic, critical, appreciative purposes; and for interpersonal, group, and public contexts. Prerequisite: COM 101 and COM 102.

343-4 Communication and Human Relations
Focuses on the need for both personal and professional communication skills. Examines how communication enhances relationships between people, leading to healthy social transactions and productive work situations. Prerequisite: COM 102 or permission of instructor.

345-4 Public Relations: Principles and Practices
Simulation focusing on the processes of a public-relations campaign: fact finding, action planning, implementation of communication channels, and program evaluation. Experiences focus on one internal and one external campaign for students. Prerequisite: COM 256 and permission of instructor.

346-4 Public Relations Campaign Techniques
Development of skills necessary for effective planning and implementation of public relations campaigns. Includes audiences and media analysis, and the design and writing of a variety of campaign materials. Prerequisite: COM 345.

347-4 Case Studies in Public Relations
In-depth analysis of the public relations process through an examination of various cases involving public relations problems. Prerequisite: COM 345.

358-4 Emerging Communication Technologies
Examines developing communication technologies with emphasis on alternative delivery systems. Prerequisite: COM 256 and permission of instructor.

360-4 Broadcast Journalism
Examination of broadcast news with special attention given to coverage, selection, and reporting of the news. Prerequisite: COM 256 or permission of instructor.

364-4 Communication Graphics
(Also listed as ENG 364.) Introduces basic principles of graphics communication, primarily as applied to print media. Includes history and basic concepts of graphics communication, typography, photo editing, and graphic design.
365-4 Issues in Mass Communication
An in-depth examination of the major issues facing the American mass media, including such topics as media effects, content of programming, the commercialization of public broadcasting, media ownership, children's programming, and others. Prerequisite: COM 152.

366-4 Advanced News Writing
(Also listed as ENG 366.) Advanced study of writing skills, practices, and procedures used in reporting news for mass media. Actual reporting in the field is required. News writing skills introduced in COM 256 are further refined. Prerequisite: COM 256.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of speech. Topics vary.

400-2 Senior Seminar in Communication
A capstone course in which advanced communication majors develop portfolios to demonstrate achievements as preparation for careers in professional or academic areas of communication. Course includes formal assessment of communication skills. Senior standing required. Prerequisite: At least 44 hours of communication courses, including COM 101 and COM 200.

401-4 Communication Theory
A study of various classical and contemporary theories of communication. An examination of theories related to communication systems, communication interaction, and social contexts. Prerequisite: Open only to communication majors and minors who have satisfactorily completed COM 101, 102, 141, and 152.

411-4 Performance for the Media
Development of skills necessary for effective television and radio presentations. Study of criteria for selecting appropriate talent and frequent practice in a wide range of media settings.

429-4 Urban Communications Theory
(Also listed as PLS 429.) Processes and institutions by which individuals and groups communicate in an urban environment. Model of an urban communication system developed by interdisciplinary systems approach.

432-4 Gender and Communication
Theoretical and pragmatic consideration of how and why men's and women's communication behaviors are similar to one another in some instances, yet different in others, and how men and women can communicate more effectively. Prerequisite: COM 102.

439-4 Freedom of Speech
Study of the growth and development of free speech in the United States. Emphasizes the development of definitions of free speech and various communication strategies in different settings. Prerequisite: COM 101 or permission of instructor.

441-4 Advanced Interpersonal Communication
In-depth view of interpersonal communication skills: presenting, receiving, and challenging. A group context is used to promote self-directed changes in interpersonal style. Prerequisite: COM 102 or permission of instructor.

443-4 Interviewing
Through a matrix organizational structure, students experience theory in selection, survey, journalistic, performance appraisal, persuasion, and counseling interviewing situations with the focus on human resource development.

445-4 Conference Leadership
Simulation focusing on the creation, development, and execution of a professional conference through assessment of participants' needs. Experiences include completing group tasks through assigned roles developed from current leadership theories. Prerequisite: COM 101, 141, 102.

446-4 Introduction to Organizational Communication
Elements of the communication process as pertinent to the field of organizational communication. By developing understanding, a framework is established for contextual applications of the features of organizations. For communication majors only.

447-4 Organizational Communication: Applications and Strategies
Application of organizational communication theories and major theoretical perspectives to problems in public and private-sector organizations. Course includes a simulation which focuses on conflict management, leadership, and decision making in a business context.

448-4 Case Studies in Organizational Communication
A critical analysis of communication issues and problems in organizations through an examination of various cases. Prerequisite: COM 446, 447.

449-4 Survey of Communication Research
Provides a basic knowledge of the behavioral approach and current theories and experiments in communications research.

451-4 Communication Consulting and Training
By means of a matrix structure, consulting and training theories are experienced in communication programs and processes as a methodology for human resource development within organizations. Prerequisite: COM 447 or permission of instructor.
453-4 Communication and Conflict
In-depth study of the function of communication in conflict/crisis situations. Emphasizes the role that communication performs in conflict resolution in interpersonal, intergroup, and international situations.

454-4 Feature Story Writing
(Also listed as ENG 454.) Finding, writing, editing, and marketing feature material. Prequisite: COM 256 or permission of instructor.

455-4 Nonverbal Communication
Theory, survey of research, and experimental learning in nonverbal communication. Exploration of types and forms, and methods of sending and receiving nonverbal communication. Prerequisite: COM 102 or 141.

457-4 Intercultural Communication
Study of communication in intercultural environments. Emphasis on research and theory to better understand the complexity of intercultural communication interactions.

458-4 Editing for the Media
(Also listed as ENG 458.) Editing of copy for mass media with special emphasis on newspaper format, headline writing, rewriting, and general copy desk. Prerequisite: COM 256 or permission of instructor.

460-4 Programming and Management of Electronic Media
Analysis of programs and program strategies for broadcast and other electronic media. Emphasis on information for managing these media. Prerequisite: permission of instructor.

462-4 Mass Media: Law and Regulation
Study of laws and regulations affecting mass media. Prerequisite: COM 256 and permission of instructor.

464-4 Broadcast Criticism
Analysis of contemporary programming and production practices including the development of critical standards for evaluation. Prerequisite: COM 256 and permission of instructor.

471-4 Topics in Communication
Examination of special topics in the various areas of speech communication. Titles vary.

481-1 to 4 Independent Study
Faculty-directed readings and research.

482-1 to 4 Senior Honors Project
Independent studies course that allows students to pursue research that culminates in a senior honors thesis or project.

489-4 Communicating with the Elderly
Analysis of the unique communication behaviors of the elderly and the physical, social, and emotional changes that cause them, Development of interpersonal, interviewing, and reporting skills by direct interaction with this age group.

491-1 Communication Techniques and Evaluation
Philosophy and techniques of conducting communication events. Includes the planning, initiating, and summarizing of communication activities, and evaluating written and oral performance.

Comparative Literature/CPL
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

310-4 Problems in Comparative Literature
Readings in comparative literature dealing with themes, myths, genres, literary movements, or characters: e.g., the myth of Electra in the modern theater, the picaresque novel, existentialism in European fiction, and the ambidextrous hero in literature.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of comparative literature. Topics vary.

Comparative Studies/CST/CSE
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

CST 220-3 Comparative Non-Western Environments
Examination of distinctive environments of Asia and Africa through analysis of the geographic patterns of land use, population, settlements, economic activities, languages, religions, and political systems.

CST 230-3 Comparative Non-Western World Views
Examination of the world views of selected non-Western peoples and their varied expressions in literature and religion, emphasizing examples from Asia, Africa, Latin America, and the Middle East. Titles vary.

CST 240-3 Comparative Non-Western Cultures
Introduction to the cultural diversity and uniqueness of selected areas of Asia, Africa, Latin America, and the Middle East as reflected in their cultural systems or in particular cultural manifestations such as the arts. Titles vary.

CST 250-3 Comparative Non-Western Social Systems
Examination of political processes and economic systems in Asia, Africa, Latin America, and the Middle East with special attention to contemporary issues. Titles vary.
CSE 250-3 Comparative Non-Western Economic Systems
Examination of political processes and economic systems in Asia, Africa, Latin America, and the Middle East with special attention to contemporary issues. Titles vary.

Computer Engineering/CEG

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

210-4 PC Networking I
Introduction to PC networking hardware, concepts, and technologies. Focus is on LAN administration, and hardware and software configuration using in class hands-on exercises. Internet resources, from the PC network perspective, are utilized. CS and CEG majors may not take this course for credit. Prerequisite: CS 205.

211-4 PC Networking II
Focuses on server installation, administration, multiple protocol integration, systems maintenance, and troubleshooting. Includes hands-on class and laboratory assignments. CS and CEG majors may not take this course for credit. Prerequisite: CEG 210.

220-4 C Programming for Engineers
Introduction to digital computers and computer programming with C language. Algorithms and techniques useful to engineers. Data representation, debugging, and program verification. Programming assignments include complex arithmetic. CS and CEG majors may not take this course for credit. Prerequisite: MTH 229.

221-4 Advanced C Programming for Engineers
Study and usage of the C programming language beyond what is taught in the introductory course. CEG 220, in the solution of engineering oriented problems. Prerequisite: CEG 220.

255-4 Introduction to the Design of Information Technology Systems
Introduction to the design of information systems comprising modern technologies such as SQL database programming, networks, and distributed computing with CORBA, electronic and hypertext (HTML) documents, and multimedia. Prerequisite: CS 241.

260-4 Digital Computer Hardware/Switching Circuits
(Also listed as EE 260.) Topics include switching algebra and switching functions, logic design of combinational and sequential circuits using TTL, combinational logic design with MSI and LSI, busing, storage elements, and instrumentation. Three hours lecture, two hours lab. Prerequisite: CS 142 or 240 or CEG 220 or EGR 153.

305-4 Fundamentals of Expert Systems
Definitions of AI, discussion of the different technologies that comprise the field, introduction to the fundamental concepts and methodologies of expert systems, and hands-on experience developing small expert system applications. CS and CEG majors may not take this course for credit. Prerequisite: CS 141 or 240, CEG 220 or EGR 153.

320-4 Computer Organization and Assembly Language Programming
Terminology and understanding of functional organizations and sequential operation of a digital computer. Program structure, and machine and assembly language topics including addressing, stacks, argument passing, arithmetic operations, traps, and input/output. Macros, modularization, linkers, and debuggers are used. Three hours lecture, two hours lab. Prerequisite: CEG 260, CS 242.

330-4 Object-Oriented Programming in C++
Introduction to the object-oriented programming and the C++ language. Topics include functions, pointers, structures, classes, function/operator overloading, inheritance and virtual functions, template, exceptions, and file input and output. Prerequisite: CEG 220, or CS 240, or equivalent.

360-4 Digital Systems Design
(Also listed as EE 451.) Topics include flip-flops, registers, counters, programmable logic devices, memory devices, register-level design, and microcomputer system organization. Students must show competency in the design of digital systems. Three hours lecture, two hours lab. Prerequisite: CEG 260.

402-4 Introduction to Computer Communication Design
Survey of modern digital communications techniques. Focus on serial transmission over public communications channels. Topics include information content and coding, asynchronous and synchronous formats, concentrating and multiplexing, channel properties, modulation techniques, common carrier services, error sources and control, regulatory policies, and networks and their analyses. Students must design both hardware and software components of computer communications systems. Three hours lecture, two hours lab. Prerequisite: CS 400.
411-4 Microprocessor-based System Design
Introduction to the design and development of software and computer-interfacing hardware for effective use of microprocessors in process control, data collecting, and other special-purpose computing systems. Software topics include assembly language programming, input/output, interrupts, direct memory access, and timing problems. For nonmajors only. Prerequisite: CEG 260/EE 260, EE 301, and 302.

416-4 Matrix Computations
(Also listed as MTH 416.) Survey of numerical methods in linear algebra emphasizing practice with high-level computer tools. Topics include Gaussian elimination, LU decomposition, numerical eigenvalue problems, QR factorization, least squares, singular value decompositions, and iterative methods. Prerequisite: MTH 253 or 355; and CS 142 or 241.

419-4 Introduction to Fuzzy Logic Control
(Also listed as EE 419.) Foundations and philosophy of fuzzy logic and applications to control theory. Relationship between classical PID control and fuzzy rule-based control. Techniques for rule construction and adaptive fuzzy logic controllers. Case studies of applications. Three hours lecture, two hours lab. Prerequisite: EE 413, 414.

420-4 Computer Architecture
Introduction to computer architecture, computer system analysis and design, performance and cost, instruction set architecture, processor implementation techniques, pipelining, memory-hierarchy design, input/output, and contemporary architectures. Prerequisite: CEG 320, CEG 360.

421-4 Microcomputer Design Projects
In-depth study of the design and use of microcomputer systems. Computer organization and interface facilities are examined. Hardware/software projects are required to develop techniques for hardware and software design of open-ended projects. Three hours lecture, two hours lab. Prerequisite: CEG 320, CEG 360.

425-4 VHSC Hardware Description Language (VHDL)
VHDL is an industry-standard language used to describe hardware from the abstract to the concrete level. VHDL is rapidly being embraced as the universal communication medium of design. Prerequisite: CEG 360 and CS 400.

428-4 Linear Optical Systems for Computer Engineers
Introduction to linear optical systems, transformation properties of optical systems, correlation, convolution, diffraction, applications related to optical computers, such as beam steering for optical interconnection and parallel optical algorithm for pattern search, and neural network. Prerequisite: EE 321, 322.

429-4 Internet Security
Authentication, address spoofing, hijacking, SYN floods, snarfing, sniffing, routing tricks, and privacy of data en-route. Buffer overruns and other exploitations of software development errors. Hardening of operating systems. Intrusion detection. Firewalls. Ethics. Prerequisite: CEG 402. Must have senior standing or be a first year graduate student to enroll.

433-4 Operating Systems
Management of resources in multiprocessor computer systems. Emphasizes problems of file-system design, process scheduling, memory allocation, protection, and tools needed for solutions. Course projects use C/C++ language and include designing portions of an operating system. Prerequisite: CEG 320, CS 400.

434-4 Concurrent Software Design
Classical problems of synchronization and concurrency and their solutions are examined through course projects and through readings on operating-system design. Prerequisite: CEG 433.

435-4 Distributed Computing and Systems
Study of process coordination, client-server computing, network and distributed operating systems, network and distributed file systems, concurrency control, recovery of distributed transactions, and fault-tolerant computing. Prerequisite: CEG 434 or equivalent.

453-4 Design of Computing Systems
Laboratory projects combine engineering hardware and computer-science software concepts in the design and implementation of small, special-purpose computer systems. Three hours lecture, two hours lab. Prerequisite: CEG 320, 360.

454-4 VLSI Design
(Also listed as EE 454.) Introduction to VLSI system design. Topics include CMOS devices and circuit design techniques, basic building blocks for CMOS design, fabrication processing and design rules, chip planning and layout, system timing and power dissipation, simulation for VLSI design, and signal processing with VLSI. Prerequisite: EE 431, 432, 451/CEG 360.

456-4 Introduction to Robotics
(Also listed as EE 456. ME 456.) An introduction to the mathematics, programming, and control of robots. Topics include coordinate systems and transformations, manipulator kinematics and inverse kinematics, trajectory planning, Jacobians, and control. Prerequisite: senior standing and MTH 253: proficiency in Pascal, C, or FORTRAN programming.
458-4 Digital Integrated Circuit Design with PLDs and FPGAs
(Also listed as EE 458.) Design and application of digital integrated circuits using programmable logic devices (PLDs) and field programmable gate arrays (FPGAs). A commercial set of CAD tools (Mentor Graphics and Xilinx) will be used in the laboratory portion of the course. Prerequisite: CEG 360 or EE 451.

459-4 Integrated Circuit Design Synthesis with VHDL
(Also listed as EE 459.) Application of VHSIC hardware description language (VHDL) to the design, analysis, multi-level simulation, and synthesis of digital integrated circuits. A commercial set of CAD tools (Mentor Graphics) will be used in the laboratory portion of the course. Prerequisite: CEG 220, C programming or equivalent, and CEG 260.

460-4 Introduction to Software Engineering
Concepts of software engineering. Analysis, design, and implementation of software engineering concepts that comprise structured programming and design. Case studies serve as examples illustrating the software life-cycle model. Three hours lecture, two hours lab. Prerequisite: CS 400.

461-4 Object-Oriented Programming and Design
Study of object-oriented design and programming. Programming topics emphasize the core concepts of encapsulation, inheritance, polymorphism, and dynamic binding. Additional topics include class organization, software maintenance, and design of reusable components. Prerequisite: CEG 460.

463-4 Personal Software Development Process
Discusses software development as it relates to the individual, software process measurement, design and code reviews, software quality measurement, design, and design verification. Each student will participate in the development of a software project. Three hours lecture, two hours lab. Prerequisite: CEG 460 or equivalent.

465-4 Interactive Systems Modeling, Analysis, and Design
(Also listed as HFE 465.) Provide students experience in interactive real-time simulation, design, implementation, and evaluation of interfaces to simulations. The relevant topics are explored through application in supervisory control of complex, dynamic systems. Prerequisite: CEG 220 or any one of the following: CEG 221, CS 241, 242 or instructor permission.

468-4 Managing the Software Development Process
Discusses software development processes, models, and techniques necessary to successfully develop large-scale software. Presents the Capability Maturity Model (CMM). Each student will participate in the development of a software project. Three hours lecture, two hours lab. Prerequisite: CEG 460.

476-4 Computer Graphics I
(Also listed as MTH 476.) Contents: raster graphics algorithms, geometric primitives and their attributes, clipping, anti-aliasing, geometric transformations, structures and hierarchical models, input devices, and interactive techniques. Students develop interrelated programs to design a three-dimensional hierarchical model, manipulate, and view it. Prerequisite: CS 400, MTH 253 or 255.

477-4 Computer Graphics II
(Also listed as MTH 477.) Continuation of CEG 476. Covers surface rendering, hidden line and surface removal, illumination algorithms, texture and mapping, color models, geometric modeling, and graphical interface design. Students develop programs and a final project. Three hours lecture, two hours lab. Prerequisite: CEG 476.

478-3 Coding Theory
(Also listed as MTH 456, EE 478.) Introduction to the essentials of error-correcting codes and the study of methods for efficient and accurate transfer of information. Topics to be covered include basic concepts, perfect and related codes, cyclic codes, and BCH codes. Prerequisite: MTH 253 or MTH 355 (or equivalent).

498-3 Design Experience
A summative computer engineering design project, carried out either individually or in small groups, building upon previous engineering, science, mathematics, and communication course work focusing on professional practice in computer science and engineering. Prerequisite: must complete a course in one of the four CEG elective packages.

499-1 to 5 Selected Topics
Topics vary. May be taken for letter grade or pass/unsatisfactory.

Computer Science/CS
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

141-4 Computer Programming I
Introduction to use of computers as a problem-solving tool. Examples from and applications to a broad range of problems. Methodology for algorithm design and for structured modular implementation is stressed. Three hours lecture, two hours lab. Prerequisite: MTH 127 or at least level four on math placement test.

142-4 Computer Programming II
Concepts introduced in CS 141 are developed in greater detail and depth. Emphasis on verification and testing of programs. Three hours lecture, two hours lab. Prerequisite: CS 141.
205-4 Computer Literacy and Office Automation
Introductory course in the use of computers in a professional environment. Personal computer work stations are employed and used for popular applications (e.g., word processing, spreadsheets and data base management, and electronic mail). Two hours lecture, four hours lab.

206-4 Computer Software Productivity Tools
Advanced use of application software to increase productivity. Covers advanced DOS and hard disk management, desktop publishing, presentation graphics, sharing data and files among different packages, spreadsheet macros, and dBase IV. Prerequisite: CS 205 or waiver.

207-4 Advanced Office Productivity II
Emphasis is placed on understanding how packages interact within an integrated environment. Personal computers are used for sophisticated word processing and desktop publishing projects. State-of-the-art presentation techniques such as hypertext will be discussed. Prerequisite: CS 205 or 206, or equivalent work experience.

208-4 Computer Programming for Business with C-I
Introduces basic concepts of programming using the C programming language. Examples are from business applications and display graphics. Emphasis is on problem solving with the computer as a tool. Prerequisite: CS 205, MTH 129.

209-4 Computer Programming for Business with C-II
Continuation of CS 208. Introduces the basic concepts of programming using the C programming language. Examples are from business applications and display graphics. Emphasis is on problem solving with the computer as a tool. Prerequisite: CS 208.

214-4 Object Based Programming
An introductory course to the use of graphic objects in a windows event-driven environment providing a case study of object-oriented programming with Visual Basic in Microsoft Windows to develop simple graphic user interfaces. Need to be familiar with programming concepts.

225-4 Ada Programming
Introduction to computer programming with Ada language relative to the software engineering environment. CS and CEG majors may not take this course for credit. Prerequisite: CS 141 or equivalent.

240-4 Computer Science I
Basic concepts of programming and programming languages are introduced. Emphasis is on structured programming and stepwise refinement. For CS/CEG majors with familiarity of a high-level programming language. Corequisite: MTH 130 and 131; or MTH 134.

241-4 Computer Science II
A continuation of CS 240. The emphasis is on data abstraction and software engineering. For CS/CEG majors only. Prerequisite: CS 240. Corequisite: MTH 229.

242-4 Computer Science III

300-4, 301-4 COBOL Programming I, II
Elements of COBOL language: techniques for debugging and interpreting computer output: linkage to subroutines and overlays: file structure involving both sequential and random access: and case studies with business applications. Three hours lecture, two hours lab. Prerequisite: for 300, CS 142 or 241; for 301, CS 300.

302-4 Client Server Databases
Relational client server database design and access techniques. Includes building database tables, writing SQL statements/programs, and developing user interfaces and reports for data retrieval using Internet. Not for credit for CS/CEG majors. Prerequisite: CS 141 or CS 208.

315-2 Job Control Language
Introduces system 370 job control language. Studies the various JCL statements. Programming exercises are assigned to give students the practical experience needed to create and run various jobs. Prerequisite: CS 142 or equivalent programming experience.

316-4, 317-4 Numerical Methods for Digital Computers
Introduction to numerical methods used in the sciences. Methods of interpolation, data smoothing, functional approximation, integration, solutions of systems of equations, and solutions of ordinary differential equations. Three hours lecture, two hours lab. Prerequisite: for 316, CS 142 or EGR 153 or CS 241 or CEG 220, MTH 231, 253, or 255; for 317: CS 316, MTH 233, 253 or 355.

340-1 Programming Language Workshop
Self-directed study in computer languages. Individual workshops are offered in significant languages such as JAVA, COBOL, PL/1, SNOBOL, LISP, SIMSCRIPT, and GPSS. May be taken for letter grade or pass/unsatisfactory. Prerequisite: CS 400.

399-1 to 5 Selected Topics
Selected topics in computer science. May be taken for letter grade or pass/unsatisfactory.

400-4 Data Structures and Software Design
Study of the implementation of data structures and control structures in professional computer programs. Introduction to the fundamentals of complexity and analysis. Study of common standard problems and solutions (e.g., transitive closure and critical path). Emphasis on high-level language software design. Three hours lecture, two hours lab. Prerequisite: CS 242, MTH 253, 257.
405-4 Introduction to Data Base Management Systems
Survey of logical and physical aspects of data base management systems. Hierarchical, network, and relational models of a data base are presented. Physical implementation methods are discussed. Experience in creating and manipulating a data base. Three hours lecture, two hours lab. Prerequisite: CS 400.

407-3 Optimization Techniques
(Also listed as MTH 407.) Concepts of minima and maxima; linear programming; simplex method, sensitivity, and duality; transportation and assignment problems; and dynamic programming. Prerequisite: MTH 233 and 253 or 255.

409-4 Principles of Artificial Intelligence
Problem-solving methods in artificial intelligence (AI) with emphasis on heuristic approaches. Topics include methods of representation, search, intelligent agents, planning, learning, natural language processing, logic, inference, robotics, and case-based reasoning. Three hours lecture, two hours lab. Prerequisite: CS 400 and CS 340 (LISP) or LISP programming experience.

410-4 Theoretical Foundations of Computing
(Also listed as MTH 410.) Turing machines; recursive functions; equivalence of computing paradigms; Church-Turing thesis; undecidability; intractability. Three hours lecture, two hours lab. Prerequisite: CS 466.

415-3 Social Implications of Computing
Examines the impact of computers and computing on society. Topics include privacy, dangers introduced by computers performing critical tasks, the effect of robots on the work force, the impact of computers on education, and the new legal issues introduced by computing.

419-3 Cryptography and Data Security
(Also listed as MTH 419.) Introduction to the mathematical principles of data security. Various developments in cryptography are discussed, including public-key encryption, digital signatures, the data encryption standard (DES), and key safeguarding schemes. Prerequisite: MTH 253 or 255.

458-3 Applied Graph Theory
(Also listed as MTH 458.) Introduction to methods, results, and algorithms from graph theory. Emphasis on graphs as mathematical models applicable to organizational and industrial situations. Prerequisite: CS 142 or 241, MTH 231.

459-3 Combinatorial Tools for Computer Science
(Also listed as MTH 459.) Introduction to some of the mathematical tools needed for an understanding of computer programming. The topics covered are summations, elementary number theory, combinatorial identities, generating functions, and asymptotics. MTH 457 recommended. Prerequisite: MTH 280.

466-4 Introduction to Formal Languages
Introduction to the theory of formal languages and automata. Emphasis is on those classes of languages commonly encountered by computer scientists (e.g., regular and context-free languages). Three hours lecture, two hours lab. Prerequisite: CS 400, MTH 257; or MTH 257 and completion of a 400-level math or statistics course.

470-4 Systems Simulation
Introduction to simulation and comparison with other techniques. Discrete simulation models. Introduction to queuing theory and stochastic processes. Comparison of simulation languages. Simulation methodology and selected applications. Three hours lecture, two hours lab. Prerequisite: CS 400 and STT 360 or STT 363.

480-4 Comparative Languages
Basic concepts and special-purpose facilities in programming languages examined through several representative languages. Three hours lecture, two hours lab. Prerequisite: CS 400.

482-4 Scanning, Parsing, and Semantic Analysis
Study and use of tools for performing lexical, syntactic, and semantic analysis of computer-oriented languages. Prerequisite: CS 466, 480.

499-1 to 5 Selected Topics
Selected topics in computer science. May be taken for letter grade or pass/unsatisfactory, at instructor's option.

Cooperative Education/CPE
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions.

001-0 Cooperative Education
Participation in field experience program.

091-0, 092-0 Cooperative Education I
University-sponsored learning experience in a work setting related to students' academic or career interests. Approved learning objectives, oral and/or written reports, employer evaluation, and final conference with cooperative coordinator are required.

092-0 Cooperative Education II
University-sponsored learning experience in a work setting related to students' academic or career interests. Approved learning objectives, oral and/or written reports, employer evaluation, and final conference with cooperative coordinator are required.
**Counseling/CNL**

**Note:** See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

**461-4 Principles of Counseling**
Overview of major counseling theories and techniques. Review of historical foundations of the mental health movement. Social, psychological, and philosophical influences are considered.

**464-4 Mental Health**
Factors influencing behavior of individuals: methods a counselor may use in observing, analyzing, and improving attitudes and behavior.

**464-4 Crisis Intervention**
Introduction to the background, theory, practice, and needs of crisis intervention within the helping professions. A variety of crisis intervention models are explored, as are the various community resources available to the crisis intervention worker. Prerequisite: CNL 461.

**467-4 Group Background and Theory**
Surveys the background, theory, patterns of function, technique of facilitating, and use of small groups in counseling. Prerequisite: CNL 461, RHB 407.

**470-1 to 6 Counselor Education Workshop**
Intensive study of selected areas from counselor education to meet the particular needs of participating students, schools, and agencies. Titles vary. Graded pass/unsatisfactory.

**Dance/DAN**

**Note:** See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

**101-3 Ballet I**
Introduction to vocabulary, techniques, and theories of ballet. Emphasis on body alignment and effective methods for gaining strength and flexibility necessary for proper ballet training.

**102-3 Ballet I**
Introduction to vocabulary, techniques, and theories of ballet. Emphasis on body alignment and effective methods for gaining strength and flexibility necessary for proper ballet training.

**103-3 Ballet I**
Introduction to vocabulary, techniques, and theories of ballet. Emphasis on body alignment and effective methods for gaining strength and flexibility necessary for proper ballet training.

**104-2 Beginning Ballet for Musical Theatre**
This beginning level of ballet is geared to the dance needs of students preparing for careers in musical theatre.

**105-2 Beginning Ballet for Musical Theatre**
This beginning level of ballet is geared to the dance needs of students preparing for careers in musical theatre.

**106-2 Beginning Ballet for Musical Theatre**
This beginning level of ballet is geared to the dance needs of students preparing for careers in musical theatre.

**111-3 Modern Dance I: Fundamentals of Dance**
Introduction to formalized movement: analysis and practice of action in time and space, use of dynamics, body toning, alignment, flexibility, strength, and coordination.

**112-3 Modern Dance I: Fundamentals of Dance**
Introduction to formalized movement: analysis and practice of action in time and space, use of dynamics, body toning, alignment, flexibility, strength, and coordination.

**113-3 Modern Dance I: Fundamentals of Dance**
Introduction to formalized movement: analysis and practice of action in time and space, use of dynamics, body toning, alignment, flexibility, strength, and coordination.

**121-1 Beginning Jazz for Musical Theatre**
Emphasis on various traditional and contemporary jazz techniques and styles within the realm of musical theatre.

**122-1 Beginning Jazz for Musical Theatre**
Emphasis on various traditional and contemporary jazz techniques and styles within the realm of musical theatre.

**123-1 Beginning Jazz for Musical Theatre**
Emphasis on various traditional and contemporary jazz techniques and styles within the realm of musical theatre.

**131-2 Intermediate Jazz I**
First-year intermediate work in jazz dance technique. Emphasis is on technical proficiency and versatility through staccato and lyrical movements. Focus on musicality and individual artistry. Prerequisite: DAN 111 or permission of department.

**132-2 Intermediate Jazz I**
First-year intermediate work in jazz dance technique. Emphasis is on technical proficiency and versatility through staccato and lyrical movements. Focus on musicality and individual artistry. Prerequisite: DAN 131 or permission of department.
133-2 Intermediate Jazz I
First-year intermediate work in jazz dance technique. Emphasis is on technical proficiency and versatility through staccato and lyrical movements. Focus on musicality and individual artistry. Prerequisite: DAN 132 or permission of department.

201-3, 202-3, 203-3 Ballet II
Development of the vocabulary, techniques, and theory of ballet. Emphasis on body alignment and flexibility. Prerequisite: DAN 103.

202-3 Ballet II
Development of the vocabulary, techniques, and theory of ballet. Emphasis on body alignment and flexibility. Prerequisite: DAN 201.

203-3 Ballet II

207-1 Beginning Tap Dance
Beginning level of tap dance introduces students with no previous experience to the fundamental movements and rhythmic structures of the form.

208-1 Beginning Tap Dance
Beginning level of tap dance introduces students with no previous experience to the fundamental movements and rhythmic structures of the form.

209-1 Beginning Tap Dance
Beginning level of tap dance introduces students with no previous experience to the fundamental movements and rhythmic structures of the form.

211-3 Modern Dance II
Fundamentals of modern dance: emphasis on skeletal alignment, breathing, relaxation, and the use of dynamics and rhythm in space. Prerequisite: DAN 113.

212-3 Modern Dance II
Fundamentals of modern dance: emphasis on skeletal alignment, breathing, relaxation, and the use of dynamics and rhythm in space. Prerequisite: DAN 211.

213-3 Modern Dance II
Fundamentals of modern dance: emphasis on skeletal alignment, breathing, relaxation, and the use of dynamics and rhythm in space. Prerequisite: DAN 212.

214-2 Modern Dance for Actors
Fundamentals of modern dance. Emphasis on skeletal alignment, breathing, relaxation, and the use of dynamics and rhythm in space. Prerequisite: DAN 113.

215-2 Modern Dance for Actors
Fundamentals of modern dance. Emphasis on skeletal alignment, breathing, relaxation, and the use of dynamics and rhythm in space. Prerequisite: DAN 214.

216-2 Modern Dance for Actors
Fundamentals of modern dance. Emphasis on skeletal alignment, breathing, relaxation, and the use of dynamics and rhythm in space. Prerequisite: DAN 215.

231-2 Intermediate Jazz II
Second-year intermediate work in jazz dance technique. Emphasis on varied allegro and adagio jazz movements. Focus will be on technical diversity, musicality, artistry, and performance. Prerequisite: DAN 133.

232-2 Intermediate Jazz II
Second-year intermediate work in jazz dance technique. Emphasis on varied allegro and adagio jazz movements. Focus will be on technical diversity, musicality, artistry, and performance. Prerequisite: DAN 231.

233-2 Intermediate Jazz II
Second-year intermediate work in jazz dance technique. Emphasis on varied allegro and adagio jazz movements. Focus will be on technical diversity, musicality, artistry, and performance. Prerequisite: DAN 232.

251-1 Dance History
Survey of Western theatrical dance from its roots in early cultures to the twentieth century. Prerequisite: DAN 113.

252-1 Dance History
Survey of Western theatrical dance from its roots in early cultures to the twentieth century. Prerequisite: DAN 251.

253-1 Dance History
Survey of Western theatrical dance from its roots in early cultures to the twentieth century. Prerequisite: DAN 252.

301-3 Ballet III
Development of the vocabulary, techniques, and theory of ballet. Emphasis on body alignment and flexibility. Prerequisite: DAN 203.

302-3 Ballet III
Development of the vocabulary, techniques, and theory of ballet. Emphasis on body alignment and flexibility. Prerequisite: DAN 301.

303-3 Ballet III
Development of the vocabulary, techniques, and theory of ballet. Emphasis on body alignment and flexibility. Prerequisite: DAN 302.

304-2 Intermediate Ballet for the Musical Theatre
Intermediate level of ballet is geared to the dance needs of students preparing for careers in musical theatre. Emphasis on strong technique which can be applied to theatre dance needs.

305-2 Intermediate Ballet for the Musical Theatre
Intermediate level of ballet is geared to the dance needs of students preparing for careers in musical theatre. Emphasis on strong technique which can be applied to theatre dance needs.
306-2 Intermediate Ballet for the Musical Theatre
Intermediate level of ballet is geared to the dance needs of students preparing for careers in musical theatre. Emphasis on strong technique which can be applied to theatre dance needs.

307-1 Intermediate Tap Dance
Intermediate level tap dance develops a more complex understanding of rhythmic structures in traditional and contemporary approaches to tap technique and choreography.

308-1 Intermediate Tap Dance
Intermediate level tap dance develops a more complex understanding of rhythmic structures in traditional and contemporary approaches to tap technique and choreography.

309-1 Intermediate Tap Dance
Intermediate level tap dance develops a more complex understanding of rhythmic structures in traditional and contemporary approaches to tap technique and choreography.

313-3 Modern Dance
Further study of modern dance techniques and styles. Material is on the intermediate to advanced level. Prerequisite: DAN 311.

311-3 Modern Dance III
Further study of modern dance techniques and styles. Material is on the intermediate to advanced level. Prerequisite: DAN 213.

312-3, 313-3 Modern Dance III
Further study of modern dance techniques and styles. Material is on the intermediate to advanced level. Prerequisite: DAN 311.

313-3 Modern Dance III
Further study of modern dance techniques and styles. Material is on the intermediate to advanced level. Prerequisite: DAN 312.

321-2 Jazz/Theatre Dance I
Diversified styles and techniques of contemporary musical theatre dancing. Emphasis on movement proficiency and versatility within the realm of jazz and theatre dance. Prerequisite: DAN 213.

322-2 Jazz/Theatre Dance I
Diversified styles and techniques of contemporary musical theatre dancing. Emphasis on movement proficiency and versatility within the realm of jazz and theatre dance. Prerequisite: DAN 321.

323-2 Jazz/Theatre Dance I
Diversified styles and techniques of contemporary musical theatre dancing. Emphasis on movement proficiency and versatility within the realm of jazz and theatre dance. Prerequisite: DAN 322.

331-3 Musical Theatre Dance Styles
Diversified styles and techniques of contemporary musical theatre dancing. Emphasis is on movement proficiency and versatility within the realm of jazz and theatre dance.

332-3 Musical Theatre Dance Styles
Diversified styles and techniques of contemporary musical theatre dancing. Emphasis is on movement proficiency and versatility within the realm of jazz and theatre dance.

333-3 Musical Theatre Dance Styles
Diversified styles and techniques of contemporary musical theatre dancing. Emphasis is on movement proficiency and versatility within the realm of jazz and theatre dance.

341-1 Improvisation
Exploration of improvisation techniques as a compositional tool. For dance majors only. Prerequisite: DAN 213.

342-1 Choreography
Exploration of compositional techniques culminating in the creation of solos and ensemble works. For dance majors only. Prerequisite: DAN 341.

343-1 Choreography
Exploration of compositional techniques culminating in the creation of solos and ensemble works. For dance majors only. Prerequisite: DAN 342.

371-1 Dance Pedagogy
Methods for teaching dance using an anatomical approach as the basis for good training in all techniques. For dance majors only. Prerequisite: DAN 252.

372-1 Dance Pedagogy
Methods for teaching dance using an anatomical approach as the basis for good training in all techniques. For dance majors only. Prerequisite: DAN 371.

373-1 Dance Pedagogy
Methods for teaching dance using an anatomical approach as the basis for good training in all techniques. For dance majors only. Prerequisite: DAN 372.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of dance. Topics vary.

401-3 Ballet IV
Advanced work in classical ballet technique stressing the development of musicality and virtuosity. Pointe work is included. Prerequisite: DAN 303 or departmental approval.

402-3 Ballet IV
Advanced work in classical ballet technique stressing the development of musicality and virtuosity. Pointe work is included. Prerequisite: DAN 401; or departmental approval.

403-3 Ballet IV
Advanced work in classical ballet technique stressing the development of musicality and virtuosity. Pointe work is included. Prerequisite: DAN 402; or departmental approval.

411-3 Modern Dance IV
Advanced work in modern dance techniques and styles. Prerequisite: DAN 313.

412-3 Modern Dance IV
Advanced work in modern dance techniques and styles. Prerequisite: DAN 411.
413-3 Modern Dance IV
Advanced work in modern dance techniques and styles. Prerequisite: DAN 412.

421-2 Jazz/Theatre Dance II
Diversified styles and techniques of contemporary musical theatre dancing including jazz adagio and allegro combinations, focusing on technique, musicality, style, and performance. Prerequisite: DAN 323.

422-2 Jazz/Theatre Dance II
Diversified styles and techniques of contemporary musical theatre dancing including jazz adagio and allegro combinations, focusing on technique, musicality, style, and performance. Prerequisite: DAN 421.

423-2 Jazz/Theatre Dance II
Diversified styles and techniques of contemporary musical theatre dancing including jazz adagio and allegro combinations, focusing on technique, musicality, style, and performance. Prerequisite: DAN 422.

431-1 Pointe Class
Emphasizes pointe work for the female dancer, to develop strength on pointe for classical ballet. Prerequisite: DAN 203.

432-1 Men's Ballet Class
Specific movements and exercises geared to the male dancer, to develop strength and virtuosity. Prerequisite: DAN 203.

433-1 Pas de Deux Class
Trains male and female dancers in the art of partnering, an essential part of all dance. Prerequisite: DAN 203.

491-1 Senior Dance Project
Advanced work for dance majors in creative projects and/or dance research. Prerequisite: DAN 343; or departmental approval.

492-1 Senior Dance Project
Advanced work for dance majors in creative projects and/or dance research. Prerequisite: DAN 491; or departmental approval.

493-1 Senior Dance Project
Advanced work for dance majors in creative projects and/or dance research. Prerequisite: DAN 492; or departmental approval.

Danish/DN
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

111-4 Essentials of Danish
Introduction to Danish with an emphasis on speaking the language.

Developmental Education/DEV
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

071-5 Reading Improvement I
To help severely underprepared students acquire the skills and confidence necessary to reduce the passive chore aspects of reading in order to stimulate an enthusiasm for learning in general. Graded pass/unsatisfactory.

072-6 Basic Writing Skills I
Provides intensive instruction for students whose writing skills are significantly below those necessary for success in university-level writing requirements. Graded pass/unsatisfactory.

073-5 Basic Mathematics I
Provides instruction in basic mathematical concepts and computations necessary for students to successfully perform mathematical functions that occur in daily life and to complete the Level II course, SS 083. Graded pass/unsatisfactory.

081-5 Reading Improvement II
To help students acquire skills necessary to comprehend a tenth grade textbook: to find the main idea, recognize sentence patterns, deduce meaning of words, and to complete an outside reading assignment. Graded pass/unsatisfactory. (Previously listed SS 081.)

082-6 Basic Writing Skills II
To provide learning activities enabling students to brainstorm for ideas; develop and organize their writing: revise: edit for grammar, sentence structure, and mechanics; and prepare standard, acceptable final drafts of their writing. Graded pass/unsatisfactory.

083-5 Basic Mathematics II
Reinforces basic mathematical concepts and computations. Provides instruction in pre-algebra and elementary algebra skills and concepts necessary for students to successfully complete elementary algebra. Graded pass/unsatisfactory.

091-3 Reading Improvement III
Reading and study skills essential for college, emphasizing comprehension, vocabulary, textbook organization, marking, note-taking techniques, and rate improvement. Graded pass/unsatisfactory.

092-4 Fundamental English Skills
Prepares students for success in English 101 by giving them instruction and activities in the fundamentals of the writing process. Graded pass/unsatisfactory.
**093-3 Basic Math Skills III**

Available to students who need help in arithmetic functions. Topics include properties of whole numbers, primes and composites, arithmetic operations, decimals, ratios, rates, proportions, percents, and elementary algebra functions. Graded pass/unsatisfactory. (Previously listed as SS 093.)

---

**Economics/EC**

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

**200-3 Economic Life**

Introduction to basic economic concepts such as resource allocation, costs, supply, demand, and public goods. Topics include American capitalism, market failures, unemployment, inflation, and taxation. The sequence EC 201, 202, 203 may be substituted. Credit will not be given for EC 200 Economic Life for students who successfully complete EC 201, 202, and 203.

---

**201-3 Principles of Economics**

Fundamental economic principles as an aid in understanding modern society. Introduction to Economics.

**202-3 Principles of Economics**

Fundamental economic principles as an aid in understanding modern society. Introduction to Microeconomics. Prerequisite: EC 201.

**203-3 Principles of Economics**

Fundamental economic principles as an aid in understanding modern society. Introduction to Macroeconomics. Prerequisite: EC 201.

---

**290-4 Economic, Business, and Social Issues**

Analyzes controversy and diversity of opinions regarding economic, business, and social issues shaping the world in which we live. Fosters critical thinking, verbal, and written communication skills through discussion, debate, and writing. Prerequisite: EC 201, 202, and 203.

---

**300-3 Consumer Economics**

Understanding the economic world in which the consumer lives, works, spends, saves, and frequently invests is stressed. Prerequisite: EC 200 or 201.

---

**301-3 Money and Banking**

Analysis of behavior and significance of money, credit, debt, and the banking system. Prerequisite: EC 201, 202, 203 or permission of instructor.

---

**315-4 Intermediate Microeconomics**

Develops the analytical tools of microeconomics, stressing market behavior of firms, industries, and consumers. Examines the production process and the operation of market mechanisms. Policy implications are emphasized. Prerequisite: junior standing: EC 201, 202, 203; and MTH 228 or permission of instructor.

**317-4 Intermediate Macroeconomics**

Analysis of national economic problems including inflation, unemployment, interest rates, and economic stability. Emphasizes the impact of public policy. This is a writing-intensive course. Prerequisite: junior standing, EC 201, 202, 203 and MTH 228 or permission of instructor.

**319-4 Institutional Economics**

Focuses on interrelationships between market and nonmarket forces, exploring contemporary social, technological, political, and other influences on resource allocation decisions and on economic change. This is a writing-intensive course. Prerequisite: EC 201, 202, 203 or permission of instructor.

**320-3 The Global Economy**

Explores how the global economic environment affects business decisions and how these decisions affect the economy of host and source countries. Analyzes the impact of international trade, foreign direct investment, and global monetary systems. Prerequisite: EC 201, EC 202, EC 203, or permission of instructor.

**321-3 Economic History**

Analysis of economic, political, social, and cultural changes resulting from industrial advancements and the control over industrial changes exercised by different societies. Prerequisite: EC 200 or EC 201, 202, 203.

**326-3 Economics of Poverty and Discrimination**

Analysis of economic causes, effects, and cures for poverty and discrimination. Study of trends, economic explanations, and current programs and legislation. Prerequisite: EC 200; or EC 201, 202, 203; or permission of instructor.

**328-3 Socialist and Radical Economics**

Development of Marxian, socialist, and radical economic doctrines with emphasis on contemporary ideas and trends. Prerequisite: EC 200; or EC 201, 202, 203; or permission of instructor.

**330-3 Urban Economic Problems and Prospects**

Analysis of economic processes that influence urban economic conditions, population movements, economic problems facing metropolitan areas, and alternative problem-solving techniques. Prerequisite: EC 200; or EC 201, 202, 203; or permission of instructor.
International Economic Relations

Covers the complexities, prospects, and consequences of international flow of goods, services, technology, and capital across countries with a diverse range of economic, social, and political institutions. Prerequisite: EC 200 or EC 201, 202, 203; or permission of instructor.

Labor Markets

A study of labor market behavior and wage determination, addressing the impact of new technologies, global competition, and deindustrialization on American labor markets. Prerequisite: EC 201, 202, 203; or permission of instructor.

Labor History and Legislation

History of the American labor movement from the early national period to the present, including labor legislation, public policy, and current issues. Prerequisite: EC 201, 202, 203; or permission of instructor.

Environmental Economics

Analysis of environmental quality from both microeconomic and systems frameworks. Emphasis on effectiveness of alternative approaches to environmental problems, including specific solutions to particular problems and general approaches to broad problems. Prerequisite: EC 200; EC 201, 202; or permission of instructor.

Managerial Economics

Application of economic analysis to management decision making. Practical methods and problems are stressed. Prerequisite: EC 201, 202, 203; or permission of instructor.

Monetary Economics

Analysis of monetary policy development and the theory of money market behavior. Emphasizes the relationship between money and national economic conditions. Prerequisite: EC 301.

Applied Econometrics

Application of statistics and economic theory to measurement, forecasting, and other economic problems. Prerequisite: Junior standing; EC 201, 202, 203; MS 202; and MTH 228.

Mathematical Economics

Application of mathematical tools in the formulation of economic theory. Methods used in model construction. Completion of a college algebra course required. Prerequisite: EC 201, 202, 203.

Forecasting Economic Activities

Techniques and theories used in forecasting. Practical methods and problems are stressed. Prerequisite: Junior standing; EC 201, 202, 203; MS 201 or equivalent; and MTH 228.

Development of Economic Thought

Historical development of economic thought and philosophies. Prerequisite: EC 201, 202, 203; or permission of instructor.

Federal Finance and the Economy

Develops a theoretical framework and working knowledge of the economic basis for government activity, government expenditures, programs, and policies, and the financing of government expenditures through taxation. Prerequisite: EC 201, 202, 203; or permission of instructor.

State and Local Finance and the Economy

Analysis of state and local government public service responsibilities, programs, and policies, including expenditures and taxation. Prerequisite: EC 201, 202, 203; or permission of instructor.

Comparative Economic Systems

Comparison of institutions of various capitalist and socialist economies including economies in transition. Comparative analysis provides a basis for evaluating government policy. Prerequisite: EC 201, 202, 203; or permission of instructor.

Industrial Organization

Analysis of business behavior under various industry structures and government policies. Emphasis on actual case studies. Prerequisite: EC 201, 202, 203; or permission of instructor.

Regional Economic Growth and Change

Regional economic analysis in a policy and planning context. Interdisciplinary approach to analyze the economics of location, inter-regional trade, regional development, urban regions, and growth strategies. Prerequisite: EC 201, 202, 203; EC 303; or permission of instructor.

International Trade and the Economy

Economic reasons for international trade, impact of trade and its restrictions on economic aggregates. Prerequisite: EC 201, 202, 203; or permission of instructor.

International Monetary Theory and Problems

Studies international monetary relations and problems. Focuses on institutions and arrangements used to finance international trade. Topics include balance of payments, the dollar and foreign exchange markets, Euro currencies, petrodollars and OPEC, and multinational corporations. Prerequisite: EC 201, 202, 203; or permission of instructor.

Economic Development and World Poverty

Explores theories of economic development and underdevelopment and their relationship to poverty. Develops strategies for reducing world poverty from different perspectives. Prerequisite: EC 201, 202, 203; or permission of instructor.

Political Economy of Women

Examines the changing role of women in the American economy from colonial times to the present, from a multicultural perspective. The combined effects of race, class, ethnicity, gender ideology, technology, education, unionism, legislation, etc., on women's evolving labor market status are investigated. Junior or senior standing required. Prerequisite: EC 201, 202, 203; or EC 200 with permission of instructor.
450-3 Economics of Information Technology
Study of information technology as an economic resource. Assessment of the economic impacts of information innovation. Applications to network economics, Internet pricing, industrial structure, electronic commerce, and globalization of markets. Prerequisite: EC 201, 202, and 203 or equivalent course.

477-3 Economic Studies
Examination of special economic issues.

478-3 Honors: Independent Study in Economics
Research in economics for fulfillment of the Honors program project requirement.

480-3 Economic Issues
Examination of selected economic issues with a view to integrating the discipline. Topics vary. For economics majors or permission of instructor.

481-1 to 3 Independent Reading
Limited to students with extensive backgrounds in economics or allied disciplines and with special reasons for in-depth study in a particular area.

482-1 to 3 Independent Reading
Limited to students with extensive backgrounds in economics or allied disciplines and with special reasons for in-depth study in a particular area.

483-1 to 3 Independent Reading
Limited to students with extensive backgrounds in economics or allied disciplines and with special reasons for in-depth study in a particular area.

Education/ED

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions.

101-1 to 2 Interpersonal Process Learning Laboratory
Explores such areas as listening, communicating, life planning, sexuality, and the helping relationship with emphasis on interpersonal process.

120-1 Teaching as a Career
Designed for prospective teacher candidates to explore teaching as a career choice. Includes an elementary/secondary field placement. Graded pass/unsatisfactory.

214-3 Introduction to Education
Provides an introduction to the teaching profession and the opportunity to examine beliefs, motives, values, and behaviors as they relate to the self as a teacher. Emphasis on philosophical, social, and psychological foundations. Corequisite: ED 216, 221.

216-3 Cultural Diversity: Schools and Society
Introduces the make-up of the culturally diverse schools: racial, religious, economic, social, intellectual, physical, age, and sex differences; focuses on implications for education. Corequisite: ED 214, 221.

218-3 Learning Theories and Problem Solving
Introduction to cognitive, affective, and psychomotor domains of learning, problem-solving models, and associated learning theories as applied to teaching. Prerequisite: ED 214, 216. 221. Corequisite: ED 220, 223.

220-3 Development of the School-Age Student
Introduction of basic developmental principles; examination of various stages of development; implications for education; and review of special topics and issues of importance to educators. Graded pass/fail. Prerequisite: ED 214, 216, 221. Corequisite: ED 218, 223.

221-1 Practicum Experience I
Field practicum introduces students to the educational process through participation in a classroom and through an examination of dynamics of the classroom and its setting. Graded pass/unsatisfactory. Corequisite: ED 301, 303.

223-1 Practicum Experience II
Field practicum introduces students to the educational process through participation in a classroom and through an examination of dynamics of the classroom and its setting. Prerequisite: ED 214, 216, 221. Corequisite: EDS 333.

225-1 Practicum Experience III
Field experience in which students apply knowledge of infant, toddler development, family, and community resources to examine issues that affect the educational system. Prerequisite: Successful completion of the first quarter of Phase I.

227-1 Practicum Experience IV
Field experience in which students apply knowledge of constructive behavior, positive discipline, authentic and naturalistic assessment and evaluation to examine issues that affect the educational system. Prerequisite: Successful completion of the first quarter of Phase I.

301-5 Schooling in a Pluralistic Society
Designed to provide professional educators an orientation to the teaching profession and pluralistic American society as well as an awareness of the total global community. Prerequisite: Sophomore status.

302-2 Classroom Management
Introduction of four discipline models; implications for classroom applications; legal concerns in discipline; and discussion of recent research, practice, and innovation in the area. Completion of Phase I program required. Corequisite: ED 327.
303-5 Introduction to Educational Psychological
Cognitive, affective, and psychomotor domains of learning, basic principles and stages of child and adolescent development, and special topics within the social contexts education. The role of research in supporting educational practice. Prerequisite: ED 301 and EDS 333.

311-4 Early Childhood Science: Curriculum and Materials
Philosophy, curriculum, and materials for teaching early childhood school science; emphasis on planning and implementation, evaluation, resources and facilities, and current and historical curricular trends in early childhood school science. Field/clinical experience required. Successful completion of all Phase II, quarter 1 in the ECE program necessary for enrollment. Prerequisite: natural science General Education requirements, MTH 243 and 244, SM 145 and all Phase I classes. Corequisite: ED 411, EDE 317, and EDE 323. Suggested corequisite: ED 427.

315-3 Early Childhood Children's Literature: Curriculum and Materials

316-3 Early Childhood Language Arts: Curriculum and Materials
Study of emerging literacy in early childhood methods and materials to facilitate oral and written communication. Integration of language art across K–3 grade curricula. Modifications and intervention to meet individual needs. Prerequisite: General Education composition requirement, Great Books requirement, completion of Phase I classes. Corequisite: ED 317, ED 417, EDE 321 (Practicum V).

317-3 Early Childhood Reading: Curriculum and Materials
Resources and procedures for pre-reading, reading readiness, and formal reading instruction. Integration of language arts across the K–3 grade curricula. Modifications and interventions to meet individual needs. Prerequisite: General Education composition requirement, completion of Phase I classes. Corequisite: ED 316, ED 417, EDE 321 (Practicum V).

321-1 Practicum Experience III
Third field/clinical practicum where students implement teaching strategies introduced in the Phase II methods components. Involvement with human service agencies and families occurs. Prerequisite: completion of Phase I and registration in Phase II required. Corequisite: ED 302.

323-1 Practicum Experience IV
Fourth field/clinical practicum where students implement teaching strategies introduced in the Phase II methods components. Involvement with human service agencies and families occurs. Prerequisite: permission of the Phase II coordinator required. Corequisite: ED 316 for elementary education majors and the designated special methods course for secondary majors.

327-3 Teaching Skills
Introduces students to the basic skills of lesson planning and presentation. Students use motivational techniques, questioning skills, alternative teaching strategies, and varied advanced technologies, to design/deliver instructional plans. Lab fee required. Prerequisite: ED 301, 303, 221, and 223, or equivalent.

370-1 to 9 Independent Reading and Minor Problems
Planned reading and/or project under the guidance of a faculty member of the College of Education and Human Services.

All of the following courses require junior or senior standing in education in addition to the listed prerequisites.

400-1 to 9 Education Honors Research
In-depth independent study under the guidance of a faculty advisor.

411-4 Early Childhood Mathematics: Philosophy, Curriculum, and Materials
Curriculum and materials for teaching mathematics to K–3 grade children based on NCTM Standards and Ohio's Competency Mathematics Model. Integration of mathematics across the curriculum. Modifications and interventions to meet individual needs. Prerequisite: natural science General Education requirements, MTH 143, MTH 243, MTH 244, and SM 145. Corequisite: ED 311 and ED 317. Enrollment restrictions: successful completion of all Phase II, quarter one in the ECE licensure program.

417-3 to 4 Early Childhood Social Studies: Curriculum and Materials
Objectives, principles, and trends of social studies in early childhood education. Field experience required. Prerequisite: Western and Non-Western General Education requirements; geography content requirement. All Phase I classes. Suggested corequisites: ED 316, ED 317, and EDE 321, 401 and EDS 459. Must have successful completion of all Phase I classes of the ECE program.
418-3 to 4 Problem Solving in School Mathematics
Designed to prepare teachers of mathematics K-8 to teach problem solving as a basic mathematical skill. Emphasis on the teaching/learning of a variety of problem-solving heuristics, applying problem-solving strategies, and using both routine and nonroutine problems in school mathematics. Prerequisite: ED 214, 216, 218, 220 or equivalent.

419-4 to 14 Supervised Teaching: Elementary
Student teachers, assigned to a public school full time, work under direct supervision of an experienced classroom teacher. In the fall, student teaching begins in late August to early September with the opening of the public school and continues for approximately 14 weeks to the end of fall quarter. During winter quarter, the period of student teaching corresponds with the academic quarter dates. During spring quarter, student teaching begins on the Monday of the university’s spring break and continues to the end of the quarter with time off according to the public school’s calendar for its spring break. Students may receive 12 credit hours for student teaching in the fall and 10 credit hours for winter and spring quarters. There is no student teaching during the summer. Formal application must be made through the Office of the Director of laboratory experiences according to the following schedule: for fall quarter, apply first two weeks of preceding March; for winter quarter, apply last two weeks of preceding September; and for spring quarter, apply last two weeks of preceding November. Concurrent enrollment in ED 440 and permission of director of laboratory experiences required. Student teaching and ED 440 constitute a full load for the quarter. No other course work may be taken. Completion of 126 credit hours (at least 12 of which must have been taken at Wright State), involvement in participation experiences, achievement of the currently required cumulative GPA, and completion of appropriate Phase II courses or equivalent with grades of “C” or above required. In addition, students in special education must also complete appropriate special education courses with a grade of “C” or above. Students seeking kindergarten certification must also complete either EDE 411 or 412 or 414 with a grade of “C” or above.

420-2 to 4 Studies in English Education
(Also listed as ENG 485.) Focuses on theoretical issues and practical problems of teaching English at all levels, including the teaching of writing and the teaching of English to speakers of other languages (TESOL).

421-3 Literature for Middle Childhood
Knowledge of a wide range of literature for middle childhood including the selection criteria and the rationale for classroom practices with children’s literature. Prerequisite: ENG 101, 102, COM 103.

422-1 to 3 Student Teaching Seminar
An elective seminar discussion of problems and concerns encountered during student teaching to bring professional theory and practice into working perspective. Corequisite: ED 419 and/or 429.

423-3 Secondary School English: Curriculum and Materials
Curriculum, methods, and materials for language arts in the secondary school; current trends in teaching English. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

424-3 Secondary Speech and Drama: Curriculum and Materials
Curriculum and materials for those preparing to teach speech and drama in secondary schools; curriculum, teaching methods, class organization, producing plays, and cocurricular activities. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

425-3 Modern Foreign Languages: Curriculum and Materials
Modern language curriculum in public schools; purposes, methods, and materials. Completion of a 200-level language course or permission of instructor required. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

427-3 European Languages: Children’s Literature, Music, and Art
Integration of children’s literature, music, and art with emphasis on selection and use of books and related activities in early childhood and pre-K elementary education.

429-4 to 15 Supervised Teaching: Multi-age
Supervised full-time student teaching in a pre-K-12, multi-age school setting. Corequisite: concurrent enrollment in ED 440 is required.

431-3 Secondary School Science: Curriculum and Materials
Curriculum and materials for teaching science; emphasis on objectives, evaluation, planning, resources and facilities, and curricular trends in science education. Completion of two-thirds of major content is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.
432-3 Improving Reading in the Secondary School
Techniques of diagnosing and correcting reading problems of secondary students. Explores secondary reading problems with emphasis on skill development. Prerequisite: ED 214, 216, 218, 220 or equivalent. Pre- or corequisite: ED 327.

437-3 Elementary School Mathematics: Curriculum and Materials
Instructional materials and methods of meaningful explanations of mathematics in the elementary school based on structural properties of number and numeration system studies at this level. Completion of two-thirds of major content field is required. Prerequisite: MTH 243 and ED 214, 216, 218, 220 or equivalent. Pre- or corequisite: ED 327.

438-3 Secondary School Mathematics: Curriculum and Materials
Curriculum, methods, and materials in the mathematics of grades 7–12. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

439-3 to 4 Secondary School Social Studies: Curriculum and Materials
Objectives, principles, and trends in secondary social studies education. Completion of two-thirds of major content field is required. Prerequisite: ED 214, 216, 218, 220 or equivalent. Corequisite: ED 323.

440-1 to 4 The Teacher in School and Society
An exit seminar preparing the student to enter the profession via consideration of societal issues affecting education and personal readiness through individual development of a product portfolio. Graded pass/fail. Corequisite: ED 419 and/or 429.

448-3 Improvement of Social Studies Instruction
In-depth analysis of new social studies resource materials and curriculum models with emphasis on improving instruction. Prerequisite: for elementary, ED 417; for secondary, ED 439.

458-1 to 9 Practicum in Education
Supervised teaching experience for students who have completed student teaching (or its equivalent) and are seeking certification in another field. Topics vary.

460-1 to 4 Practicum in English Education
Students are assigned to an instructional class that focuses on the teaching of English to speakers of other languages (TESOL) for a supervised practicum experience. Graded pass/unsatisfactory. Prerequisite: ED 420.

464-3 to 4 Evaluation
Evaluation of learning including selected forms of measurement and interpretation of data; sociometric techniques, anecdotal records, and testing. Prerequisite: ED 214, 216, 218, 220 or permission of instructor.

470-1 to 6 Curriculum and Instruction Workshop
Intensive study of a selected area of the school curriculum to meet the particular needs of the participating preservice and in-service teachers, administrators, and curriculum supervisors. Topics vary.

Educational Leadership/EDL
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

410-1 to 4 Paraprofessional Staff Training
Provides an orientation to the university for new Residence Services paraprofessionals to prepare them to be effective in their roles. Participants are exposed to the various student services available on campus as well as aspects of student development, the mission of the university, Residence Services, and New Student Orientation. Topics vary. May be taken for letter grade or pass/unsatisfactory.

411-1 to 4 Student Development for Residence Life Programs
Provides an overview of various student development concepts and functions within a residential setting. Focuses on knowledge and skills specifically for paraprofessional staff. Topics include community development, multiculturalism, peer counseling, interpersonal communication, conflict mediation and resolution, development programming, and developmental discipline. Topics vary. May be taken for letter grade or pass/unsatisfactory.

Educational Technology/EDT
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

110-1 The Electronic Library
Prepares students to take advantage of the latest electronic information technology to efficiently find, evaluate, and use information resources available in electronic or traditional formats. Titles vary.

204-2 PC Operating Systems for Educators
Strategies and techniques for teaching and using PC operating systems software to enhance productivity in practical classroom-related applications.

205-2 Word Processing for Educators
Word processing fundamentals and terminology. Activities designed for the classroom include Internet resources for teachers and basic Web page design.

206-2 Integrated Database Applications for Educators
Emphasizes the creation of database structures, manipulation of records, and the generation of reports for the classroom and educational administration.
207-2 Integrated Spreadsheet Applications for Educators
Provides an understanding of the major features of a popular electronic spreadsheet program in organizing, analyzing, and reporting data useful in teaching applications.

208-2 Presentation Graphics Software for Educators
Creation of electronic presentations and instructional material for the classroom. Topics include Internet resources for educators and the basics of Web page creation and design.

209-2 The Internet: Applications for Educators
Internet tools and resources are explored in navigating the superhighway to research and retrieve information of practical value in classroom applications and professional development.

211-3 Basic Keyboarding and Document Formatting
Introduction to the keyboard and the development of keyboarding speed and accuracy. Basic document formatting with word processing software is practiced in the production of correspondence, reports, and tabulations.

212-3 Advanced Keyboarding and Desktop Publishing
Acquired skills in keyboarding, word processing, and document formatting are reinforced in the production of documents with graphics and other advanced features. Skill building activities continue to build keyboarding speed and accuracy. Two lab hours per week required. Prerequisite: EDT 211 or permission of instructor.

220-Basic Word Processing Applications
Essential features of word processing software are introduced and practiced in the creation of a variety of documents for business and personal use. Prerequisite: EDT 212 or permission of instructor.

221-3 Intermediate Word Processing Applications
In-depth study and application of the advanced features of word processing software. Editing and composing activities emphasize critical thinking and communication skills. Two lab hours per week required. Prerequisite: EDT 220.

222-3 Advanced Word Processing Applications and Desktop Publishing
Principles of typography and design supplement advanced work processing functions in desktop applications that include newsletters, flyers, brochures, manuals, presentation media, and Web publishing. Two lab hours per week required. Prerequisite: EDT 221.

305-4 Integrated Applications in Business and Office Technology I
Comprehensive applications-office software through integrated projects and exercises that include access to Internet tools and resources for business and the classroom. Two lab hours per week required. Lab hours added to include hands-on practice with content-related software and activities. Prerequisite: EDT 205 or EDT 221; EDT 206-208; or with permission of instructor.

280-3 Classroom Applications of Computer-Based Technology
Instruction to the use of computer-based technology in K–12 instruction. Focus is on selecting courseware and integrating it into lessons.

306-3 Office and Records Management Systems
 Procedures for controlling both paper and electronic business records and the analysis of the records cycle, retention programs, storage and retrieval processes and systems, and electronic imaging in records management.

335-3 Business Mathematics for Business and Marketing Teachers
Designed for business and marketing education majors to review, demonstrate, and develop strategies in teaching math fundamentals and consumer math.

370-1 to 4 Independent Study
Student pursues an individualized course of study under the close supervision of a faculty member. It may include extensive readings, a research project, a paper, or a production. May be taken for letter grade or pass/unsatisfactory.

433-5 Curriculum and Materials: Accounting/Basic Business and Marketing Education
Instructional strategies in using technology as a tool in teaching and learning. Topics include the role of state and professional guidelines in curriculum development. Completion of two-thirds of major content field required. Two hour lab per week required. Prerequisite: ED 301, 303 or equivalent. Corequisite: ED 323.

434-5 Curriculum and Materials: Office Procedures and Technology
Instructional strategies and trends in curriculum development as affected by current office technology, employer expectations, and state and professional guidelines. Field/clinical experiences required. Two hours lab per week required. Prerequisite: EDT 212, 433.

435-3 Business Education Curriculum and Materials: Shorthand, Transcription, and Secretarial Procedures
Curriculum, methods, and materials in teaching shorthand, transcription, and secretarial procedures. Field/clinical experiences required. Completion of two-thirds of major content field is required. Prerequisite: OA 203, 213. Corequisite: ED 327.

436-2 Production of Instructional Materials
A nontechnical course with emphasis on production of locally made materials for classroom use including mounting, lettering, computer graphics, and transparency production.

440-3 Topics in Office Administration
Emphasizes effective leadership and human relations skills in office administration. Topics include an analysis of the effects of technology and global and multicultural influences on the office and its workforce.
455-4 Television Production
Survey of television production from a single-camera, remote production perspective, including use of editing equipment.

463-3 Survey of Adolescent Literature
Study of books appropriate for students ages 12–21. Survey and evaluation of the literature, studies of reading interests, and issues related to this field of literature.

470-1 to 6 Workshop in Educational Technology
Intensive, practical study in a selected area of educational or applied technology. Titles vary.

485-3 Computers for Educators
Computer software and hardware systems and their uses are discussed with emphasis on their effects on education and the teacher.

487-4 Introduction to BASIC for Educators
Introduction to computer programming in the BASIC language including programs and techniques useful to educators. Topics include techniques for program design, flowcharting, coding, testing, and documentation.

491-1 to 12 Library/Media Practicum in the Elementary School
Supervised student teaching in an elementary public school library media center. Prerequisite: Certification requirements completed.

492-1 to 12 Library/Media Practicum in the Secondary School
Supervised student teaching in a secondary public school library media center. Prerequisite: Certification requirements completed.

Education—Early Childhood Education/EDE

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

221-1 Practicum I: ECE (Early Childhood Education)
Placement in which students observe and participate in the dynamics of a classroom: observe stages of cognitive, socio-emotional, linguistic, and physical development in children; as well as observe diverse learning and teaching styles. Graded pass/unsatisfactory. Formal acceptance to CEHS and permission to begin Phase I of the ECE licensure program required. Corequisite: EDE 221, EDE 230, EDE 300, EDE 301 and EDE 315. Prerequisite: EDT 280.

223-1 Practicum II: ECE (Early Childhood Education)
Placement in which students observe and participate in the education of children with special needs in various environments (self-contained, resource, inclusion), by delivering remediation, reinforcement, tutoring and enrichment for individuals and small groups. Graded pass/unsatisfactory. Formal acceptance to CEHS and permission to begin Phase I of the ECE licensure program required. Corequisite: EDE 221, EDE 230, EDE 300, EDE 301, EDE 315. Prerequisites: EDE 225, EDE 303 and EDE 307. Recommended corequisite: ED 315.

225-1 Practicum III: ECE (Early Childhood Education)
Placement in which students observe and participate in developmentally appropriate programming for infants and toddlers, focusing on language and social development. Students acquire information about community resources for young children and families. Graded pass/unsatisfactory. Formal acceptance to CEHS and satisfactory completion of Phase I, first quarter is necessary for enrollment. Prerequisites: EDE 221, EDE 223, EDE 230 and EDE 300. Corequisites: EDE 231, EDE 303, and EDE 307. Recommended corequisite: ED 315.

227-1 Practicum IV: ECE
Placement in which student observe and apply knowledge of motivation and management strategies (constructive, positive discipline, redirection, etc.) as well as formal and informal evaluation and assessment techniques with individuals and small groups. Graded pass/unsatisfactory. Prerequisite: EDE 225, EDE 231, EDE 303, EDE 307. Corequisites: EDE 302, EDE 464. Recommended corequisites: ED 327 and ED 407. Formal acceptance to CEHS and satisfactory completion of Phase I, 2nd quarter.

230-3 Introduction to Early Childhood Education
Social, economic, historical, and political issues affecting EDE. Legal requirements, state/federal and professional guidelines, and standards and regulations in the development and evaluation of programs for young children from birth to eight years. Prerequisites: EDT 280. Corequisites: EDE 221, EDE 223, EDE 300, EDE 301, EDE 315. Formal acceptance to CEHS and permission to begin Phase I of the ECE licensure program required.

231-4 Developmentally Appropriate Programming in ECE: Birth–5 yrs.
Introduction to developmentally and individually appropriate environment; organizational and curricular design of EDE programs for 0-5 years old. Primary focus on organization, administration and curricula in pre-school programs (3-5 year olds). Prerequisites: EDE 221, EDE 223, EDE 230, EDE 300, EDE 301, EDE 315. Corequisites: EDE 225, EDE 303 and EDE 307. Recommended corequisite: ED 315. Formal acceptance to CEHS and satisfactory completion of Phase I, 1st quarter required.
300-3 Schooling in a Culturally Diverse Society
A historical, social, economic, and philosophical orientation to pluralistic society and within a global community. Issues affecting the professional educator, i.e. technology, accountability, legal rights and responsibilities, unionization, school funding, etc. Prerequisite: Behavioral Science Gen. Ed. And EDT 280. Corequisites: EDE 221, EDE 223, EDE 230, EDE 300, EDE 301, EDE 315. Formal acceptance to CEHS and permission to begin Phase I of the ECE licensure program required.

301-3 Human Growth and Development: Prenatal through Early Childhood
Early childhood research methods, principles, and stages of cognitive, physical, linguistic, psycho-motor, and socio-emotional development. The roles of developmentally and individually appropriate practices, motivation, learning theories, and problem solving in the early childhood environment. Prerequisite: behavioral science General Education requirement, EDT 280. Corequisite: EDE 221, EDE 223, EDE 230, EDE 300 and EDE 315. Formal acceptance to CEHS and permission to begin Phase I of the ECE licensure program required.

302-3 Managing Young Children’s Behavior in the EC Setting
The study of classroom behavior management within the framework of child development, developmentally appropriate practices, and constructivist education including pro-active planning and organization and appropriate expectations for young children. Prerequisite: EDE 225, EDE 231, EDE 303, EDE 307. Corequisites: EDE 227, EDE 404, Recommended corequisites: ED 327 and ED 407. Formal acceptance to CEHS and satisfactory completion of Phase I, 2nd quarter required.

303-3 Social Development and Play in Early Childhood Education
Social and emotional development and play as purposeful behavior in young children. Curriculum, materials, and assisting technology to facilitate communication and social interaction in early childhood settings. Prerequisite: EDE 221, EDE 223, EDE 230, EDE 300, EDE 301 and EDE 315. Corequisites: EDE 225, EDE 231, and EDE 307. Recommended corequisite: ED 315. Formal acceptance to CEHS and satisfactory completion of Phase I, 1st quarter required.

307-3 Language Development and Communication Disorders: ECE
Speech and language development, causes and effects of communication disorder; formal/ informal evaluation, intervention strategies for the classroom teacher. Assistive technologies for children with speech and language disabilities. Formal acceptance to CEHS and satisfactory completion of Phase I, first quarter is necessary for enrollment. Prerequisite: EDE 221, EDE 223, EDE 230, EDE 300, EDE 301, EDE 315. Corequisite: EDE 225, EDE 231 and EDE 303. Recommended corequisite: ED 315.

309-4 Emerging Literacy in Early Childhood
Understanding language and literacy growth. Encouragement of interest in reading, designing and implementing readiness, and early literacy instruction, including pre-reading and pre-writing behaviors. Field placement required. Prerequisite: ED 214, 216, 218, 220 and EDE 230 or equivalent.

312-4 Math and Science in Early Childhood Education
Examination of the theoretical basis and appropriate content of math and science learning for young children. Field placement required. Prerequisite: ED 214, 216, 218, 220, and EDE 230.

315-3 Young Children with Special Needs
Causes and effects of various developmental disabilities, theories and legalities of early intervention services 0-8, service delivery models, family and agency involvement. Prerequisite: EDT 280. Corequisites: EDE 230, 300, 301, 221, and 223. Formal acceptance to CEHS and permission to begin Phase I of the ECE licensure program.

317-3 Meeting the Individual Needs of Young Children
Curricular interventions and adaptations, meeting individual needs of all children in the early childhood environment including implementation of IEPs and IFSP. Includes alternative presentation styles, modification, remediation, assistive technologies, enrichment, etc. Prerequisite: All Phase I classes and ED 327. Corequisite: ED 311, ED 411, and EDE 323. Suggested corequisite: ED 427 or ESL class.

321-1 Practicum V: ECE
Placement in which students design and implement strategies for individuals, and small and large groups in language arts and social studies including modification of curriculum and presentation style to provide for individual needs of children. Graded pass/unsatisfactory. Prerequisite: all Phase I classes. Corequisites: ED 316, ED 317, ED 417. Suggested corequisites: EDE 401 and EDS 459. Successful completion of all Phase I classes of the ECE Licensure Program required.

323-1 Practicum VI: ECE
Placement in which students implement strategies introduced in methods classes for individual, small and large groups requiring accurate content presentation, use of technology, modification of presentation style and curriculum providing for children’s individual needs. Graded pass/unsatisfactory. Prerequisite: all Phase I classes. Corequisites: ED 311, 411 and EDE 317. Suggested corequisite: ED 427 or an ESL class. Successful completion of all Phase II, 1st quarter in the ECE program required.
401-3 Families and Community in Early Childhood Education
The role of family behaviors and involvement in the care/education of the young child. Special emphasis on the role of community agencies in family decision-making and goal setting. Prerequisite: all Phase I classes. Suggested corequisites: ED 316, 317, 417, EDE 321, and EDS 459. Successful completion of all Phase I classes of the ECE program required.

419-10 to 12 Student Teaching: Early Childhood Education
Students are assigned to a public or certified private facility under direct supervision of experienced teachers for a total of 10–12 weeks in two different age ranges (pre-K–K and 1–3 grades). Graded pass/unsatisfactory. Prerequisite: must be approved by CEHS.

419-10 to 12 Student Teaching: Early Childhood Education
Students are assigned to a public or certified private facility under direct supervision of experienced teachers for a total of 10–12 weeks in two different age ranges (pre-K–K and 1–3 grades). Graded pass/unsatisfactory. Prerequisite: must be approved by CEHS.

441-3 Mental Retardation and Developmental Disabilities
Causes and effects of mental retardation and related developmental disabilities in home, school, and community settings. Prerequisite: ED 214, 216, 218, 220.

442-4 Curriculum, Methods, and Materials for the Mildly Handicapped
Practices and procedures used in developing elementary and secondary curricula for the mildly handicapped. Includes academic adaptations and social and motor skills development as applied to development and implementation of the IEP. Prerequisite: ED 214, 216, 218, 220, EDS 455 or equivalent. Corequisite: ED 323.

443-3 Introduction to Augmentative Communication
Introduces etiology, problems, and needs of non-speaking individuals. Hands-on experiences are required using augmentative aids and devices with multiply handicapped individuals. Prerequisite: EDS 451 or experience with multiply handicapped individuals.

444-3 Instructional and Behavioral Management of Exceptional Individuals
Prepares special educators to meet the instructional and behavioral management demands particular to working with exceptional individuals, including those with severe behavior difficulties. Prerequisite: ED 302, EDS 451 or 455 (EDS 451 and 455 may be taken concurrently).

445-3 Career Education and Occupational Training for Exceptional Individuals
Role of occupational training in the curriculum; relationships with the world of work; problems of organizing and administering; and methods and techniques used in developing occupational interests and abilities at various levels. Prerequisite: EDS 451 or 455 or RHB 301.

451-3 Nature and Needs of the Multiply Handicapped
Reviews etiological aspects; historical, educational, and training programs; and concerns and issues related to multiply handicapped individuals including mildly, moderately, severely, and profoundly retarded or physically handicapped. Prerequisite: ED 220.

452-3 Education of Individuals with Physical, Sensory, and Motor Disorders
Overview of the etiology and educational implications of physical disabilities, sensory deficits, and communication disorders. Emphasis on psycho-educational, physical, and medical needs of these individuals. Prerequisite: ED 220 or EDS 451 or permission of instructor.

Education–Special Education/EDS

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

333-3 Learning Differences: Introduction
An introduction to the history, laws, terminology, and best practice for the education of students with mild to moderate, moderate to intensive, or gifted educational needs. Also covered are inclusive education practices. Corequisite: ED 223.
453-3 Curriculum, Methods, Materials, and Adaptive Equipment for Multiply Handicapped
Reviews organizations, methods, materials, and techniques for educating and training multiply handicapped children, youth, and adults. Related professional organizations and community services are reviewed. Prerequisite: EDS 444, 451, 452. Corequisite: ED 325.

454-3 Administration and Interpretation of Educational Data
Students learn to administer and interpret formal and informal educational assessment instruments and to communicate assessment data to parents and colleagues. Pre- or corequisite: EDS 455.

455-2 to 4 Nature and Needs of the Mildly Handicapped
Causes and effects of specific learning and language disabilities, severe behavior disorders, and mild developmental disabilities. Study of teaching strategies appropriate for these individuals. Prerequisite: ED 218, 220.

456-4 Clinical Practice in Remediation
Supervised clinical practice in the diagnostic teaching of basic academic and social skills including learning and study strategies. Prerequisite: ED 317 or ED 432, 437, EDS 442, 454, 455. Non-special education majors do not need EDS 442 and 455.

459-3 Communication and Consultation Skills for Special Educators
Techniques of collaborative consultation needed to enhance communication with exceptional individuals, parents, and educational team members. Pre- or corequisite: EDS 451 or 455.

470-1 to 4 Workshop in Special Education
Intensive practical study in a selected area of special education. May be taken for letter grade or pass/unsatisfactory.

Electrical Engineering/EE

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

140-4 Principles of Electrical Engineering
Provides a practical introduction to important applications, and hands-on experience with components and assembly of electrical systems. Laboratory experience is emphasized.

250-2 Engineering Problem Solving with MATLAB
Provides engineering students an extensive hands-on experience with MATLAB. Topics include relational and logic operations, array manipulation, low-level I/O, graphics, and symbolic manipulations. Prerequisite: MTH 229.

260-4 Digital Computer Hardware/Switching Circuits
(Also listed as CEG 260.) Topics include switching algebra and switching functions, logic design of combinational and sequential circuits using TTL, combinational logic design with MSI and LSI, busing, storage elements, and instrumentation. Three hours lecture, two hours lab. Prerequisite: CS 142, 240, CEG 220, or EGR 153.

301-4 Circuit Analysis I
Basic elements and laws, circuit analysis techniques and concepts, energy storage elements, first and second order circuits, sinusoidal steady state analysis. Prerequisite: MTH 233, PHY 242. Co- or post requisite: EE 302.

302-1 Circuit Analysis I Laboratory
Computer-assisted analysis, RLC circuits, operational amplifiers and circuits, Thévenin and Norton equivalents, maximum power transfer, and AC networks. Pre- or corequisite: EE 301.

303-3 Circuit Analysis II
Circuit review, alternating current concepts, computer-aided circuit analysis, two-port networks, power. Prerequisite: EE 301 and 302. Co- or post requisite: EE 304.

304-1 Circuit Analysis II Laboratory
Application of AC concepts, computer-aided circuit analysis, two-port networks, and power theory. Prerequisite: EE 301 and 302. Pre- or corequisite: EE 303.

321-4 Linear Systems I
Considers systems in a broad context including linear, nonlinear; variant, invariant; and analog and discrete. Various approaches to system and signal modeling are also discussed with emphasis on the Fourier transform technique. Prerequisite: EE 301, 302.

322-4 Linear Systems II
Discrete time signals and systems, the z-transform, input/output theory, discrete Fourier transform, IIR and FIR filter design, relationships, and sampling. Prerequisite: EE 321.

326-4 Random Signals and Noise
Provides a practical introduction to the concepts of random events, characterization of stochastic signals, first and second order moment descriptions of random processes, and input/output descriptions of random signals and noise in linear systems. Prerequisite: EE 321.

331-3 Electronic Devices
Introduction to basic solid-state electronic devices. Fundamentals necessary for comprehension and further study of modern engineering electronics. Major topics include carrier flow in semiconductors, p-n junction theory, semiconductor diodes, bipolar junction transistors, field effect transistors, biasing, and introduction to amplifiers. Prerequisite: EE 301, 302. Corequisite: EE 332.
332-1 Electronic Devices Laboratory
Applications of diodes and transistors in analog circuits, design of bias circuits. Prerequisite: EE 301, 302. Corequisite: EE 331.

345-4 Electromagnetics
Electrostatics and magnetics; induced electro-motive force. Maxwell's equations and their physical interpretation and application. Prerequisite: EE 301, 302, MTH 232.

346-4 Transmission Lines, Waveguides, and Radiating Systems
Plane waves in free space and matter. Transmission line equations and application of Smith chart. Wave propagation in rectangular waveguides. Introduction to radiating systems, including dipole and loop antennas. Rudimentary design of typical systems containing transmission lines, waveguides, and antennas. Prerequisite: EE 345.

401-3 Electronic Circuits and Devices
Application of modern electronics to instrumentation and data collection. Topics include semiconductor devices, small signal and power amplifiers, operational amplifiers, power supplies, digital fundamentals, and microprocessors. For nonmajors. Prerequisite: EE 301, 302. Corequisite: EE 402.

402-2 Electronic Circuits and Devices Laboratory
Experiments in simple circuits, diode and transistor circuits, operational amplifiers, and simple microprocessors. Prerequisite: EE 301, 302. Corequisite: EE 401.

412-4 Industrial Controls and Automation
For each student to gain a working knowledge of industrial controls and automation. Focus is on developing an understanding of wiring diagram creation, hardware selection, and programmable logic controller design and operation. Includes laboratory. Prerequisite: EE/CEG 260 or EE 401 and 402.

413-3 Control Systems I
Introductory course providing students with a general control background. Major topics include block diagrams and signal-flow graphs, electromechanical modeling including state variable representation, time response, root locus, and introduction to design. Prerequisite: ME 213, EE 321. Co- or post-requisite: EE 414.

414-1 Control Systems I Laboratory
Application and testing of control systems theory with electromechanical systems. Pre- or corequisite: EE 413.

415-3 Control Systems II
Using Control Systems I background, this course concentrates on controller design, in both the time and frequency domains, using Nyquist, Bode, and root locus techniques. Prerequisite: EE 413, 414.

416-1 Control Systems II Laboratory
Application and testing of control systems theory with electromechanical systems. Prequisite: EE 413, 414. Pre- or corequisite: EE 415.

417-3 Digital Control Systems
Samples spectra and aliasing, analysis and design of digital control systems using root locus and transform techniques; discrete equivalents of continuous controller, quantization effects, and introduction to programmable logic controllers. Prerequisite: EE 322, EE 415.

418-4 Control Systems Design Project
A project-oriented design course integrating design methodology with the principles of controller design developed in previous courses. Topics include project planning, system specs, documentation, design reviews, written and oral reports, and system test. Two hours lecture, four hours lab. Prerequisite: EE 417 and EE 420.

419-4 Introduction to Fuzzy Logic Control
(Also listed as CEG 419.) Foundations and philosophy of fuzzy logic and applications to control theory. Relationships between classical PID control and fuzzy rule-based control. Techniques for rule construction and adaptive fuzzy logic controllers. Case studies of fuzzy logic control applications. Three hours lecture, two hours lab. Prerequisite: EE 417, 414.

420-1 Digital Control Systems Laboratory
Sampling, temperature control, position control on a microprocessor-based system, PLC implementation, quantization, error computational delay, and frequency response. Prerequisite: CEG 411, EE 415, EE 416. Corequisite: EE 417.

421-4 Communication Theory
Analysis of communication systems using the Fourier transform and the convolution integral. Discussion of Nyquist's sampling theorem and an introduction to binary pulse code modulation (PCM). Various analog (AM, SSB, WBFM) and digital (BPSK, AK, FSK) modulation techniques are also discussed and analyzed. Prerequisite: EE 321.

425-4 Numerical Methods for Engineers
Root location, polynomial interpolation, numerical methods for linear systems analysis, matrix methods in circuit analysis, frequency domain circuit analysis techniques. Prerequisite: EE 321, MTH 253, proficiency in C, Pascal or FORTRAN.
431-3 Electronic Circuits
Theory and application of basic engineering electronics developed for discrete and integrated circuits. Topics include bipolar and field effect transistor amplifier analysis and design, frequency response, and multi-stage and feedback amplifiers. Prerequisite: EE 321, 331, and 332. Corequisite: EE 303, 304, and 432.

432-1 Electronic Circuits Laboratory
Design of single and multiple stage amplifier circuits, feedback amplifiers, circuits to meet frequency response specifications, and output stages. Prerequisite: EE 331 and 332. Corequisite: EE 431.

435-4 Design and Implementation of Analog and Digital Filters

436-4 Digital Signal Processing: Theory, Application, and Implementation
Introduces the principles and applications of digital signal processing (DSP) from the design and implementation perspective. Topics include analog-to-digital/digital-to-analog converters and digital filters, Fourier analysis algorithms, and real-time applications, all implemented on a TMS320C30 floating point DSP chip. Prerequisite: EE 322, CEG 220 or CS 240.

444-4 Linear Integrated Circuits
Theory and applications of linear integrated circuits. Topics include ideal and real operational amplifiers, frequency response and compensation, active filters, comparators, and waveform generators. Three hours lecture; two hours lab. Prerequisite: EE 431, 432.

445-4 Electromagnetic Compatibility
Identification of possible sources of electromagnetic interference (EMI) in an electronic device or system. Fundamental EMC design principles concerning conducted and radiated emissions, reduction of susceptibility to EMI and EMI shielding. Prerequisite: EE 345.

446-4 Microwave Circuit Design
Review of Smith chart, introduction to microstrip lines, impedance matching, power gain equations, stability considerations, and design methods for amplifiers and oscillators. CAD is used. Prerequisite: EE 346.

447-4 Antenna Theory and Design
Linear dipole antennas, antenna arrays, thin-wire antennas, moment method analysis examples (see dipole, folded dipole, etc.), and broadband and frequency-independent antennas. Computer-aided design and analysis of wire antennas, feed networks, and antenna arrays using antenna CAD software. Prerequisite: EE 346.

448-4 RF/Microwave Systems Design Projects
A project-oriented design course, integrating design methodology with the principles of microwave circuit analysis and electromagnetic wave propagation developed in previous courses. Formal documentation, design reviews, and reporting are required. Prerequisite: EE 446.

449-4 Pulse and Digital Circuits
Design, analysis, and application of pulse and switching circuits using both Field Effect Transistors (FETs) and Bipolar Junction Transistors (BJTs). Transistor level design of digital integrated circuits including NMOS, CMOS, TTL, and ECL logic families. Design of digital interface and buffer circuits. Transmission line effects in digital applications. Three hours lecture, two hours lab. Prerequisite: EE 431, 432.

451-4 Digital Systems Design
(Also listed as CEG 360.) Topics include flip-flops, registers, counters, programmable logic devices, memory devices, register-level design, and microcomputer system organization. Students must show competency in the design of digital systems. Three hours lecture, two hours lab. Prerequisite: EE 260.

454-4 VLSI Design
(Also listed as CEG 454.) Introduction to VLSI system design. Topics include CMOS devices and circuit design techniques, basic building blocks for CMOS design, fabrication processing and design rules, chip planning and layout, system timing and power dissipation, simulation for VLSI design, and signal processing with VLSI. Prerequisite: EE 431, 432, EE 451/CEG 360.

455-4 Electronic Circuits Design Project
A project-oriented design course, integrating design methodology with the principles of integrated circuit design, developed in previous courses. The focus of the course is an integrated circuit design project including the topics of project selection, planning and management, system specification, documentation, design reviews, written and oral reports, and testing. Two hours lecture, four hours lab. Prerequisite: EE 454.
456-4 Introduction to Robotics
(Also listed as CEG 456, ME 456.) An introduction to the mathematics, programming, and control of robots. Topics include coordinate systems and transformations, manipulator kinematics and inverse kinematics, trajectory planning, Jacobians, and control. Prerequisite: senior standing and MTH 253; proficiency in Pascal, C, or FORTRAN programming.

458-4 Digital Integrated Circuit Design with PLDs and FPGAs
(Also listed as CEG 458.) Design and application of digital integrated circuits using programmable logic devices (PLDs) and field programmable gate arrays (FPGAs). A commercial set of CAD tools (Mentor Graphics and Xilinx) will be used in the laboratory portion of the course. Prerequisite: EE 451.

459-4 Integrated Circuit Design Synthesis with VHDL
(Also listed as CEG 459.) Application of VHDL hardware description language (VHDL) to the design, analysis, multi-level simulation and synthesis of digital integrated circuits. A commercial set of CAD tools (Mentor Graphics) will be used in the laboratory portion of the course. Prerequisite: CEG 220, C programming or equivalent, and EE 260.

473-4 Communication Systems Design
Concepts and techniques of probability theory are reviewed and extended to random process and information theory. Baseband digital PCM technique, selected digital RF modems, and introduction to communication networks are presented. Prerequisites: STT 363, EE 421.

475-3 Introduction to Radar Systems
Study of the radar equation, antenna patterns, target cross sections and system losses, radar measurements, pulse Doppler and coherent techniques, detection probability and signal-to-noise ratio, side lobe clutter, synthetic arrays, and pulse compression techniques. Prerequisite: EE 322.

476-4 Communication/Signal Processing Design Projects
A project-oriented communication and signal processing design course involving a problem definition stage, an analysis and design stage, and a final implementation stage. Topics include project selection, planning and management, system specification, design reviews, written and oral reports, and final system testing. Two hours lecture, four hours lab. Prerequisite: EE 436 and either EE 435 or EE 473.

478-3 Coding Theory
(Also listed as MTH 456, CEG 478.) Examines the essentials of error-correcting codes and the study of methods for efficient and accurate transfer of information. Topics to be covered include basic concepts, perfect and related codes, cyclic codes, and BCH codes. Prerequisite: MTH 253 or MTH 355 (or equivalent).

480-1 to 4 Selected Topics in Electrical Engineering
Prototype offering for a new course in electrical engineering. Topics and prerequisites vary.

499-1 to 4 Special Problems in Engineering
Special problems in advanced engineering. Topics vary.

Engineering/EGR
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-1 Engineering and Computer Science Orientation
Introduction to the College of Engineering and Computer Science and overview of the degree programs offered. Provides information on degree entrance requirements, academic policies and procedures, study and success strategies, team building skills, interpersonal communication, engineering ethics and honors, student clubs, cooperative education opportunities, and career guidance.

153-4 FORTRAN Programming
Introduction to the use of digital computers with structured FORTRAN as the programming language. Algorithm development and engineering problem-solving techniques. Use of library subroutines and graphical displays. Corequisite: MTH 229.

190-3 Fundamentals of Engineering I
Provides a practical exposure to important applications and hands-on laboratory experience to give students an introduction to computer science and engineering. Teamwork and problem solving are emphasized. May be taken for a letter grade or pass/unsatisfactory.

191-3 Fundamentals of Engineering II
Continuation of EGR 190. Provides an introduction to engineering practice and the opportunity to examine different engineering fields. Includes freshman design experience culminating in a team competition. May be taken for a letter grade or pass/unsatisfactory. Prerequisite: EGR 190.

199-1 to 4 Special Topics in Engineering
Topics may vary. May be taken for letter grade or pass/unsatisfactory.
335-3 Technical Communications for Engineers and Computer Scientists
A modular approach to oral and written communication of technical information to an expert audience. Includes describing technical mechanisms and processes; designing and using tables, graphs, charts, and figures; producing technical proposals, progress reports, feasibility reports, and formal reports; and doing technical briefings. Prerequisite: ENG 101, 102, and sophomore standing.

482-3 Engineering Fundamentals
A review of the fundamental concepts covered in an undergraduate engineering curriculum to help students prepare for the fundamentals of engineering examination. Senior standing in an engineering program or graduation from an engineering program required. May be taken for a letter grade or pass/unsatisfactory.

499-1 to 5 Special Problems in Engineering
Special problems in advanced engineering. Topics vary. May be taken for letter grade or pass/unsatisfactory.

Engineering Physics/EP

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

231-1 Contemporary Areas of Engineering Physics
Survey of areas of engineering physics. Discussion of specific problems in fields such as space science, fluid and plasma dynamics, thermal science, lasers, instrumentation, materials research, and nuclear engineering.

322-4 Applied Optics
(Also listed as PHY 322.) Study of optical instruments by means of both geometrical and physical optics. Theory and application of interferometry and light detection devices. Brief introduction to lasers and holography. Three hours lecture, two hours lab. Prerequisite: MTH 253, PHY 244 or equivalent.

400-3 Properties of Semiconductor Materials
(Also listed as PHY 400.) Crystal structure, energy bands, charge carriers, and carrier motion in semiconductors. Electrical and optical properties. P-N junction diodes. Equilibrium, dc, ac, and transient characteristics. Metal-Semiconductor junctions, Diode design. Prerequisite: PHY 242, 244, and CHM 121.

401-3 Semiconductor Device Physics
(Also listed as PHY 401.) Covers structure and characteristics of bipolar transistors, field effect transistors, and other selected devices. Includes design and computer modeling of devices. Prerequisite: EP 400 or PHY 400.

402-3 Semiconductor Device Processing
(Also listed as PHY 402.) Survey of the individual processes used in fabricating semiconductor devices. Integration of these processes to produce MOS and bipolar structures. Computer design aids. Prerequisite: EP 401 or ME 370.

432-3 Lasers
(Also listed as PHY 432.) Introduction to the physics of lasers including emission and absorption processes in lasing, the factors controlling laser gain, the properties of optical resonators, and a survey of salient features for principal types of lasers. Prerequisite: PHY 260, MTH 233 or permission of instructor.

494-3 Engineering Physics Projects
Independent design/development/research projects in engineering physics. A detailed written final report and seminar presentation are required. A project proposal must be approved by the program faculty before registration.

499-3 Honors Engineering Physics Projects
Independent design/development/research projects in engineering physics for departmental honors students. A final report, seminar presentation, and journal submission are required. A project proposal must be approved by the program faculty before registration.

English/ENG

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

Unless otherwise specified, successful completion of freshman English is the minimum prerequisite for all major courses. Bachelor of Arts degree candidates majoring in English must meet the minimum major requirements from courses in this group. For majors, ENG 255 and 256 are prerequisite to enrollment in other literature courses in this group.

094-4 English as a Second Language: Speaking
Basic course in spoken English, both production and comprehension. For nonnative speakers of English only.

097-4 English as a Second Language: Basic Writing
Basic course in written communication with an emphasis on sentence structure. For nonnative speakers of English only.

098-4 English as a Second Language: Advanced Writing
Course in written communication with an emphasis on grammatical structures, organizational skills, and topic development. For nonnative speakers of English only.
101-4 Processes of Writing
Introduces students to principles of effective written communication and concepts of reading and writing to learn. Stresses invention, drafting, revising, and editing, along with effective critiquing and collaborating. Enrollment based on placement essay examination.

102-4 Effective Written Discourse
Adapts principles introduced in ENG 101 to writing tasks assigned throughout the university. Stresses writing effectively within various forums, reading critically, using source materials, and summarizing. Prerequisite: "C" or better in ENG 101.

199-1 to 4 Topics in English
Problems, approaches, and topics in the fields of English. Topics vary. May be taken for letter grade or pass/unsatisfactory.

201-3 Contemporary Literature
Readings in American and British fiction, poetry, and drama of the present and the recent past; for example, American novel since 1945, literature of the absurd, protest literature, and contemporary poetry. Prerequisite: ENG 102.

202-3 The Literary Tradition
Readings in British and American literature; for example, Shakespeare, American masterpiece, British novel, and readings in biography. Prerequisite: ENG 102.

203-3 World Literature
Readings in world literature; for example, the literature of Africa, the international best seller, and the hero in world myth. Prerequisite: ENG 102.

204-3 Great Books: Literature
Introduction to selected masterpieces of poetry, drama, and fiction from the Western literary tradition of the Greeks to the 20th-century, viewed in their historical context and read for their enduring interest.

205-3 Afro-American Literature
Readings in African American literature; for example, Phyllis Wheatley to the present, nineteenth-century freedom literature, twentieth-century black novel, and the female African-American tradition. Titles vary. Prerequisite: ENG 102.

210-3 Introduction to Poetry
Poetry as a type of literature together with an introduction to various approaches to the enjoyment of poetry. Prerequisite: ENG 102.

211-3 Introduction to Fiction
Introduction to the reading of prose fiction, including a study of the elements of fiction, various forms and modes of fiction, and the enjoyment of fiction. Prerequisite: ENG 102.

212-3 Introduction to Drama
Introduction to the study and analysis of drama, including differences among plays of different periods. Prerequisite: ENG 102.

240-3 Intermediate Composition
Improvement of writing skills with special attention to individual writing weaknesses. Includes a review of basic writing principles. Prerequisite: ENG 102.

250-4 The Study of Literature I
Introduction to the discipline of English, with a focus on the study of poetry and the writing of critical papers on literary topics. Prerequisite: ENG 102.

251-4 The Study of Literature II
Introduction to the discipline of English, with a focus on the study of narrative and the techniques of literary analysis and research. Prerequisite: ENG 250 or 255 or 256.

257-4 Basic Media Writing
(Also listed as COM 256.) Introduction to writing for the media. Structure and organization of media copy. Course requires reporting in the field.

291-3 Introduction to Creative Writing
Introduction to the fundamental techniques and strategies of poetry and short fiction; analysis of anthologized poems and stories; and group discussion of manuscripts. Prerequisite: ENG 102.

302-4 Poetry Writing
Fundamentals of poetry writing, practice in traditional and contemporary concepts of poetic form, reading and discussion of a wide spectrum of traditional and modern poetry, and group discussion of students' poems. May be repeated twice for credit. Prerequisite: ENG 102.

303-4 Short Story Writing
Introduction to the theory and practice of writing the short story, including critical reading of contemporary short stories and group discussion of student written stories. May be repeated twice for credit. Prerequisite: ENG 102.

304-4 Dramatic Writing
(Also listed as TH 304.) Theory and practice of techniques of dramatic writing emphasizing writing of original plays. Prerequisite: ENG 102.

330-4 Business Writing
Written business and organizational communication; attention to various forms including short reports and informal oral presentations. Prerequisite: ENG 102.

333-4 Fundamentals of Technical Writing
Survey of the fundamental principles and skills used in scientific and technical writing. Prerequisite: ENG 102.
340-4 Language for Elementary Teachers
Systematic methods of examining the sound system and sentence structure of English, with applications of language acquisition and variation related to the elementary classroom. Prerequisite: ENG 102.

341-3 Advanced Composition for Secondary Teachers
Combines study and teaching of composition with practice in writing. Emphasis on expository writing with special attention to evaluation of writing and problems of secondary school teachers. Prerequisite: ENG 102.

342-3 Advanced Composition for Elementary Teachers
Study and practice of writing emphasizing informative and creative writing taught in the elementary school and problems of teaching writing to elementary school students. Prerequisite: ENG 102.

343-4 Advanced Composition
Emphasis on sophisticated techniques of expository writing and the refinement of style. Prerequisite: ENG 102.

344-4 Research Writing
Instruction in organizing, documenting, and writing of research papers. Research projects based not only on primary and secondary sources but also on experiment and investigation. Prerequisite: ENG 102.

345-4 Writing Workshop
Introduction to the teaching of writing in middle and high school language arts and English classes. Students will participate in writing workshop activities and study underlying principles of workshop instruction. Prerequisite: ENG 102.

346-4 Reading Workshop
Introduction to direct reading instruction and workshop methodology through the modeling of teaching strategies. Topics include classroom organization and planning, journals, questioning strategies, skills and literary minilessons, and response projects. Prerequisite: ENG 102.

347-4 Desktop Publishing and Technical Graphics
Introduction to the design and illustration of technical documents through labs requiring use of word processing and desktop publishing systems.

350-4 British and American Literature: History
Representative works from major periods of British and American Literature, read with attention to their historical background and cultural contexts. Prerequisite: ENG 102.

351-4 British Texts: Medieval to 17th Century
Representative works of major English writers of the medieval period and the 16th century. Prerequisite: ENG 102.

352-4 British Texts: 17th to 18th Centuries
Representative works of major British writers of the 17th and 18th centuries. Prerequisite: ENG 102.

353-4 British Texts: 19th Century
Representative works of major romantic and victorian writers. Prerequisite: ENG 102.

354-4 British Texts: 20th Century
Representative works of major English writers of the modern period. Prerequisite: ENG 102.

355-4 American Texts: Earlier 19th Century
Representative works of major American writers before the Civil War. Prerequisite: ENG 102.

356-4 American Texts: Later 19th Century
Representative works of major American writers from the Civil War to World War I. Prerequisite: ENG 102.

357-4 American Texts: 20th Century
Representative works of major American writers since the twenties. Prerequisite: ENG 102.

359-4 Post-Colonial Texts
Representative works of major anglophone writers from around the world. Prerequisite: ENG 102.

364-4 Communication Graphics
(Also listed as COM 364.) Introduces basic principles of graphics communication, primarily as applied to print media. Includes the history and basic concepts of graphics communication, typography, photo editing, and graphic design.

366-4 Advanced News Writing
(Also listed as COM 366.) Advanced study of writing skills, practices, and procedures used in reporting news for mass media. Actual reporting in the field is required. News writing skills introduced in COM 256 are further refined. Prerequisite: ENG 257 or COM 256.

385-4 Adolescent Literature
Introduction to various types of literature written for young adults. Reading and analysis of adolescent books with an emphasis on their selection and use in the secondary language arts classroom. Prerequisite: ENG 102.

392-4 Poetry Writing Workshop
Intermediate practice in writing and revising poems, refining craft and style, with the aim of producing poetry of superior merit; group discussion of manuscripts; and reading and discussion of modern poetry and poetics. May be repeated twice for credit. Prerequisite: ENG 302 or permission of instructor.

393-4 Fiction Writing Workshop
Intermediate study and practice of the techniques and forms of fiction in a continuing workshop environment, with focus on improving the narrative skills of individual students. May be repeated twice for credit. Prerequisite: ENG 303 or permission of instructor.
399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of English. Topics vary. Prerequisite: ENG 102.

400-4 Advanced Technical Writing
Reviews the fundamentals of technical writing with attention to reports, proposals, manuals, technical articles, and style manuals. Emphasis on writing for specific fields with opportunity for independent writing projects in the student’s major field. Prerequisite: ENG 333 and 347.

402-4 Technical Editing
Experience in various elements of technical editing—grammar, style, and content; editing for consistency of format and adherence to standards; and preparing a document for printing. Prerequisite: ENG 400.

405-1 to 6 Topics in Technical Writing
Courses, seminars, or workshops in specialized topics relating to technical writing. Prerequisite: ENG 400 or permission of instructor.

The following series of “Studies” is intended to provide a wide range of courses approaching literature from a variety of significant viewpoints. Because a large number of courses can be offered under each “Studies” number, students should consult the department for a list and brief description of the particular courses that will be offered during a given academic year.

410-4 Studies in British Literature
Intensive study of British literary history and/or the work of individual British writers. Intended to develop an understanding of literature within the contexts of the author’s life, literary production, and historical background. Prerequisite: ENG 255/256 or ENG 251; at least one of the ENG 350–359 sequence.

420-4 Studies in American Literature
Intensive study of American literary history and/or the work of individual American writers. Intended to develop an understanding of literature within the contexts of the author’s life, literary production, and historical background. Prerequisite: ENG 255/256 or ENG 251; at least one of the ENG 350–359 sequence.

430-4 Studies in Literature, Gender, and Sexuality
Intensive study of literature from the perspectives of gender theory. Intended to develop an understanding of gender and sexuality as important both to literature and to its critical appreciation. Prerequisite: ENG 255/256 or ENG 251; at least one of the ENG 350–359 sequence.

440-4 Studies in Ethnic and Regional Literature
Intensive study of literature from different regions of America or reflecting the experiences of different ethnic groups. Intended to develop an understanding of race, region, and ethnicity as important both to literature and to its critical appreciation. Prerequisite: ENG 255/256 or ENG 251; at least one of the ENG 350–359 sequence.

450-4 Studies in Literary Theory
Intensive study of literary theory in order to develop an understanding of literary questions and approaches. Prerequisite: ENG 255/256 or ENG 251; at least one of the ENG 350–359 sequence.

454-4 Feature Story Writing
(Also listed as COM 454.) Finding, writing, polishing, and marketing feature material. Prerequisite: ENG 257 or COM 256 or permission of instructor.

458-4 Editing for the Media
(Also listed as COM 458.) Editing of copy for mass media with emphasis on newspaper format, headline writing, rewriting, and general copy desk. Prerequisite: ENG 257 or COM 256 or permission of instructor.

460-4 Studies in Literary Genres and Themes
Intensive study of literary genres (e.g., poetry, the novel, satire) or of literary themes. Intended to develop an understanding of formal and structural aspects of literature. Prerequisite: ENG 255/256 or ENG 251; at least one of the ENG 350–359 sequence.

470-4 Studies in World Literature
Intensive study of non-European literature, focused nationally, regionally, cross-culturally, thematically, and generically. Prerequisite: ENG 255/256 or ENG 251; at least one of the ENG 350–359 sequence.

477-1 to 6 Workshop
Intensive study of selected special topics or problems to meet the particular needs of participating students. Titles vary.

478-4 Introduction to Linguistics
Presents a survey of the scientific study of language and focuses on describing and explaining languages in their natural environment. Includes phonetics, phonology, morphology, syntax, semantics, pragmatics, and sociolinguistics.

479-4 History of the English Language
Study of the ancestry and early growth of the English language, the history of English sounds and inflections, the development of the English vocabulary, and variations in pronunciation and usage in modern British and American English. Prerequisite: ENG 102.

480-4 Studies in Language and Literacy
Intensive study of linguistic and/or rhetorical approaches to language. Intended to develop an understanding of language history, structure, theory, pedagogy, and context. Prerequisite: ENG 478.

481-4 Theory of ESL (English as a Second Language)
Presents a theoretical foundation for the study of second language acquisition, including first language acquisition, interlanguage, contrastive analysis, error analysis, language universals, communicative competence, and learning theory. Prerequisite: ENG 478.
482-4 Grammatical Structures of English
Develops linguistic analysis skills to help students recognize, analyze, and remediate written and spoken grammatical errors in ESL/EFL instructional contexts. Also focuses on pedagogical aspects of grammar instruction to native speakers of English. Prerequisite: ENG 478.

483-4 Sociolinguistics
Examines the sociology of language, the ethnography of speaking, the variation in language structures, the social varieties of English, and their political and educational implications, and the relationship of these to second language acquisition. Prerequisite: ENG 340 or 478.

484-4 TESOL Methods and Materials
Develops skills in designing curricula through creating and adapting appropriate materials and activities, as well as evaluating and effectively using existing methodologies and materials available to the teacher of ESL/EFL. Prerequisite: ENG 340 or 478.

485-2 to 4 Studies in English Education
(Also listed as ED 420.) Focus on theoretical issues and practical problems of teaching English at all levels, including the teaching of writing and teaching of English to speakers of other languages (TESOL). Prerequisite: ENG 340 or 478.

486-4 Integrated Language Arts Curriculum
Study of the integration and pedagogy of reading, writing, listening, speaking, viewing, and visually representing. Emphasis on responding to literature and introduction to interdisciplinary and thematic units. Prerequisite: ENG 345, ENG 346.

487-4 TESOL Assessment
Investigates key concepts and underlying theories in the field of language assessment. Looks at purposes and types of assessment with a focus on the development and use of authentic assessment for English language learners.

490-4 Senior Seminar in Literature
Intensive study and discussion of a significant writer or work. Students will conduct a quarter-long research project culminating in a seminar paper; students will also prepare a portfolio of their undergraduate work. Titles vary. Prerequisite: ENG 251 and at least three courses from ENG 410-480 series.

491-1 to 4 Directed Reading
Supervised reading in special areas of American, English, or world literature in translation, and English language and linguistics not available through course structure. Limited to senior English majors with a 3.0 cumulative average.

492-4 Poetry Writing Seminar
Advanced students work closely with instructor on writing and revision, leading to the creation of professional and publishable poetry. Reading and discussion of contemporary poetry and poetics. May be repeated twice for credit. Prerequisite: Permission of instructor.

493-4 Fiction Writing Seminar
Advanced study and practice of the techniques and forms of fiction of any length, with emphasis on producing fiction of professional and publishable quality. May be repeated twice for credit. Prerequisite: Permission of instructor.

495-4 Internship
Practical experience performing writing-related tasks in cooperation with local business, professional, and service organizations. Performance is supervised and evaluated by the director of writing programs. Graded pass/unsatisfactory.

498-2 English Honors Tutorial
Two-quarter sequence for senior English majors who are doing an English honors project.

499-2 English Honors Tutorial
Two-quarter sequence for senior English majors who are doing an English honors project.

Environmental Health Sciences/EH

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

292-1 Introduction to Environmental Health
Introduction to the role of the environmental health profession in meeting current problems in public health and environmental quality.

360-3 Environmental Aspects of Water Quality
Relationship of physical and biotic environments to design and operation of systems and procedures employed in maintenance and promotion of a quality, healthful human environment. Emphasis on water quality control and waste disposal methods. Prerequisite: BIO 252, CHM 123.

362-3 General Environmental Health
Relationship of physical/chemical/biotic environments to design/operation of systems and procedures employed in maintenance/promotion of quality, healthful human environments. Emphasized: food/dairy sanitation, solid waste, institutional/housing/recreational sanitation, and vector control.

364-3 Solid and Hazardous Waste Management
Examines the fundamentals of solid, infectious, and hazardous waste management. Topics covered include regulatory history, regulatory processes, environmental audits, requirements for waste generators, transporters, treatment/storage/disposal facilities, and pollution prevention concepts.
366-9 Environmental Sciences Internship
One quarter internship in a cooperating environmental or public health agency or industrial organization. Supervised by faculty and professional environmentalists. Reports and specific assignments determined in cooperation with internship director. Graded pass/unsatisfactory. For environmental health majors only. Prerequisite: Three 300-level EH courses.

368-4 Hazardous Materials Health and Safety
Covers the operation of managing hazardous materials and emergency response in the workplace or at spills or hazardous waste sites. Satisfies OSHA training requirements No. 29 CFR 1910.120. Prerequisite: CHM 123.

401-1 to 5 Topics in Environmental Science
Advanced topics of current interest in the environmental sciences. Topics vary. May be taken for a letter grade or pass/unsatisfactory.

431-3 Risk Assessment
Studies the determination of quantitative risk to humans and the environment. Approaches currently used in regulatory activities are described, showing method of hazard identification, sampling, data evaluation, exposure assessment, toxicity assessment, and risk characterization. Minimum of two BIO courses and completion of freshman chemistry required.

432-3 Risk Assessment II
Designed as a follow-up course to EH 431. Studies of key components of risk assessments, will include pharmacokinetic modeling, environmental fate and transport modeling, low dose extrapolation, and risk communication. Prerequisite: EH 431.

451-3 Environmental Management and Risk Communication
Enlarges students' environmental perspectives by focusing on management issues as they relate to air, water, and land resources, including ethics, policy, and economics, as well as questions relating to specific resources.

461-2 Problems in Environmental Health
Seminar/workshop in professional aspects of environmental health. For environmental health majors only. Prerequisite: EH 366 or permission of instructor.

462-3 Epidemiology and Community Health
Communicable and occupational diseases of contemporary importance; includes epidemiological investigation, environmental considerations, and control procedures. Prerequisite: EH 360 and 362 and STT 264 or permission of instructor.

463-3 Public Health Organization
Lecture/seminar course covering principles of public health organization and administration, public health law, comprehensive health planning, and the community services provided by health-related agencies. May be taken for letter grade or pass/unsatisfactory.

466-3 Fundamental Occupational Health and Safety
Introduction to accident recognition, evaluation, and control in the work environment. Emphasis on methods of hazard recognition and control management. Prerequisite: CHM 123.

467-3 Fundamental Occupational Health and Safety Laboratory
Introduction to accident recognition, evaluation, and control in the work environment by hands-on equipment use. Methods of inspection, accident investigation, and evaluation of accident programs are stressed. Prerequisite: CHM 123.

468-3 Advanced Occupational Health and Safety
Introduction to industrial hygiene. Emphasis on routes of entry into the human body and physiological effects of industrial pollutants. Prerequisite: CHM 123.

472-3 Air Quality Management
Designed to provide a broad overview of the science of air quality and its management: includes atmospheric pollutants, dispersion, health and welfare effects, air-quality monitoring, source control, regulation, and indoor air pollution.

492-2 Environmental Issues Seminar
Students will gain a better understanding of the controversies surrounding many current environmental issues, while also enhancing their library research, presentation, and advocacy skills.

Finance/FIN
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

205-3 Personal Financial Management
Provides knowledge that helps nonbusiness students effectively manage their personal financial affairs. Topics include personal financial statements, budgeting, tax planning, investing and savings, consumer borrowing, insurance, real estate, and retirement planning.

280-3 Special Topics in Finance
Seminar in a finance topic of current and timely interest. Topics and prerequisites vary. For nonmajors only.

All of the following courses require junior standing in addition to the listed prerequisites.
301-3 Business Finance I
Introduction to the basic concepts, principles, and analytical techniques of financial management. Topics include financial planning and analysis, risk and return, time value of money, and capital budgeting. Prerequisite: ACC 202, CS 205, EC 201, 202, 203, MS 202.

302-3 Business Finance II
Continuation of FIN 301. Emphasis on financial decisions and cost of capital. Prerequisite: FIN 301.

303-3 Case Problems in Financial Management
Application of basic financial concepts and analytical techniques to financial decision making. Extensive use of cases. Prerequisite: FIN 302.

305-3 Personal Financial Planning
Financial problems encountered in managing individual affairs such as family budgeting, installment buying, insurance, home ownership, investment in securities, taxes, retirement planning, and estate planning.

331-3 Real Estate Principles and Practices
Introduction to the principles and practices of real estate. Topics include the real estate profession and industry, real estate contracts, market analysis, valuation approaches, financing techniques, investment analysis, and home ownership. Successful completion of this course meets part of the licensing requirements for real estate salespeople in Ohio.

332-3 Real Estate Law
Includes all areas of law commonly concerned with the typical real estate practitioner and investor-consumer. Topics include the law of agency as applied to real estate brokers and salespeople, law of fixtures, estates (including leases), conveyancing of real estate, real estate managers, zoning, cooperatives, condominiums, and license laws of Ohio. Successful completion of this course meets part of the licensing requirements for real estate salespeople in Ohio.

351-3 Risk and Insurance
Introduction to principles and practices of personal risk management and insurance. Topics include property and liability insurance, life insurance, disability insurance, health insurance, and social security.

401-3 Investing in Securities
Introduction to the theory and practice of investing in stocks, bonds, and other securities. Prerequisite: FIN 302.

402-3 Seminar in Investments
Advanced treatment of the theory and practice of investing. Provides opportunities for individual investigation of selected topics. Prerequisite: FIN 401.

411-3 Management of Financial Institutions
Analysis of issues relating to the financial management of financial institutions. Prerequisite: FIN 302.

420-3 Seminar in Financial Management
In-depth treatment of advanced problems in managerial finance. Topics include capital budgeting, capital structure theory, cost of capital, dividend policy, and long-term financial management. Prerequisite: FIN 303.

421-3 Working Capital Management
Theory and practice of working capital management, including cash management, credit policy, inventory policy, and short-term financing. Extensive use of cases. Prerequisite: FIN 302.

433-3 Real Estate Finance
In-depth study of the instruments, markets, techniques, and strategies of real estate finance. Successful completion of this course meets part of the licensing requirements for real estate brokers in Ohio. Prerequisite: FIN 302, 331.

434-3 Real Estate Valuation and Appraisal
In-depth analysis of the theory and practice of valuing and appraising real estate. Successful completion of this course meets part of the licensing requirements for real estate brokers in Ohio. Prerequisite: FIN 302, 331.

435-3 Investing in Real Estate
Explores the theory and practice of real estate investment analysis as it relates to personal financial planning objectives. Prerequisite: FIN 302, 331; ACC 441.

452-3 Life and Health Insurance
Analysis of the problem of economic insecurity resulting from premature death, disability, and old age. General theory of life and health insurance, its economic and social implications, and underlying principles and reasons for various contract provisions, underwriting practices, and legal doctrines are analyzed. Individual and group plans are covered. Prerequisite: FIN 351.

453-3 Property and Liability Risk Management
Study of the concepts and techniques of property and liability risk management from the perspective of both individuals and business firms. Prerequisite: FIN 351.

461-3 Retirement Planning and Employee Benefits
Familiarizes students with the concepts of retirement planning and employee benefits and the application of these concepts to overall financial planning for individuals and small businesses. Prerequisite: FIN 302, 351; ACC 441.

462-3 Estate Planning
Provides a theoretical and practical approach to estate planning. Includes estate and gift taxes, wills, trusts, and estate planning techniques. Prerequisite: FIN 302, 351, ACC 441.
463-3 Seminar in Financial Services
Emphasizes the development and application of a coordinated and systematic approach to financial planning. Extensive use of cases. For financial services majors only. Prerequisite: FIN 401, 461, 462, MKT 336.

470-3 or 6 Practicum in Financial Planning
Students participate in financial planning laboratories and attend workshops on interviewing techniques, data gathering, plan preparation, and computerized planning models. For financial services majors only. Prerequisite: FIN 351, 401, 461, ACC 441, and permission of instructor.

477-1 to 3 Finance Studies
Independent study in selected areas of finance or financial services.

478-1 to 6 Honors: Independent Study in Finance
Research in finance for fulfillment of the Honors program project requirement.

480-1 to 6 Special Topics in Finance
Seminar in a finance topic of current and timely interest. Topics and prerequisites vary.

481-3 or 6 Internship in Finance
One-quarter faculty-supervised internship in finance. Students work in a firm or public agency, participate in seminars, and submit reports. Topics vary.

490-3 International Financial Management
Study of the international aspects of financial management. Topics include foreign exchange management, international capital budgeting, international financing, tax planning, and working capital management. Prerequisite: FIN 302.

French/FR

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-4 First-Year French
Study of the vocabulary and structure of the French language; practice in conversation, reading, and writing.

102-4 First-Year French
Study of the vocabulary and structure of the French language; practice in conversation, reading, and writing.

103-4 First-Year French
Study of the vocabulary and structure of the French language; practice in conversation, reading, and writing.

111-4 Essentials of French
Introduction to French with emphasis on speaking the language.

150-4 French Grammar Review
A thorough review of French grammar with an emphasis on oral practice.

201-4 Second-Year French
Grammar review, reading, and discussion of selected texts, with practice in speaking and writing the language. Prerequisite: FR 103 or equivalent.

202-4 Second-Year French
Grammar review, reading, and discussion of selected texts, with practice in speaking and writing the language. Prerequisite: FR 201 or equivalent.

203-4 Second-Year French
Grammar review, reading, and discussion of selected texts, with practice in speaking and writing the language. Prerequisite: FR 202 or equivalent.

311-4 French Conversation
Practice in oral use of French emphasizing the culture of the French-speaking world. Prerequisite: FR 203 or equivalent.

312-4 French Conversation
Practice in oral use of French emphasizing the culture of the French-speaking world. Prerequisite: FR 203 or equivalent.

313-4 French Conversation
Practice in oral use of French emphasizing the culture of the French-speaking world. Prerequisite: FR 203 or equivalent.

321-4 French Composition
321 and 322: Writing techniques and grammar review; written stylistic analyses. Prerequisite: FR 203 or equivalent.

322-4 French Composition
321 and 322: Writing techniques and grammar review; written stylistic analyses. Prerequisite: FR 203 or equivalent.

323-4 French Composition
Introduction to written literary analysis of poetry, prose, and drama. Prerequisite: FR 203 or equivalent.

325-4 Business French
An introduction to the language of business French with insight into France's place in the global economy. Prerequisite: FR 203.

331-4 Survey of French Literature
331: Middle Ages, 16th and 17th centuries. 332: 18th, 19th, and 20th centuries. Prerequisite: FR 312 and 322 or permission of instructor.

332-4 Survey of French Literature
331: Middle Ages, 16th and 17th centuries. 332: 18th, 19th, and 20th centuries. Prerequisite: FR 312 and 322 or permission of instructor.

FR 312, 322, and 332 or permission of instructor are prerequisites for the following advanced courses:
Course Descriptions 265

351-4 French Civilization
Study of the main currents of French civilization with emphasis on the development of literary and cultural aspects. Conducted in French.

361-2 French Phonetics
Pronunciation, dictation, and intonation. Corrective exercises and laboratory work.

381-1 Applied Elementary French Instruction
French majors assist elementary course instructors in conducting classes. For French majors only.

382-1 Applied Elementary French Instruction
French majors assist elementary course instructors in conducting classes. For French majors only.

383-1 Applied Elementary French Instruction
French majors assist elementary course instructors in conducting classes. For French majors only.

359-4 Studies in Selected Subjects
Problems, approaches, and topics in a field of French. Topics vary.

401-4 Advanced Studies: Language/Civilization
Conducted in French. Topics vary.

421-4 Literature of the Middle Ages
Les Chansons de Geste; Roland, Guillaume; le roman de Tristan; Chretien de Troyes; le roman de Renart; French literature, and the romanesque. Prerequisite: FR 322, 332; or permission of instructor.

422-4 Villon to Chénetier
Three centuries of French poetry: Villon, Scève, Marot, Du Bellay, Ronsard, d’Aubigné, Malherbe, La Fontaine, Voltaire, and Chénetier. Prerequisite: FR 322, 332; or permission of instructor.

423-4 17th- and 18th-Century Novel
Mme. de La Fayette, Scarron, Fénelon, Montesquieu, Lesage, Prévost, Diderot, and Laclos. Prerequisite: FR 322, 332; or permission of instructor.

441-4 Libertines and Moralists: From Rabelais to Voltaire
Currents of skepticism and humanism in the intellectual history of French. Major authors: Rabelais, Montaigne, Cyrano de Bergerac, Saint-Évremond, La Bruyère, La Rochefoucauld, Bayle, Fontenelle, Diderot, and Voltaire. Prerequisite: FR 322, 332; or permission of instructor.

442-4 17th- and 18th-Century Theatre
Works of Corneille, Molière, Racine, Marivaux, Diderot, Voltaire, and Beaumarchais. Prerequisite: FR 322, 332; or permission of instructor.

443-4 The Enlightenment
History of political and social ideas in 18th-century France. Based principally on works of Montesquieu, Diderot, Voltaire, and Rousseau. Prerequisite: FR 322, 332; or permission of instructor.

450-4 to 4 Independent Undergraduate Research
Topics vary.

451-4 Romanticism from Rousseau to Hugo
Includes Bernardin de Saint-Pierre, Chateaubriand, Mme. de Stael, Nothier, Lamartine, Vigny, Musset, and Nerval. Prerequisite: FR 322, 332; or permission of instructor.

452-4 19th-Century Novel
Chateaubriand, Constant, Stendhal, Balzac, Flaubert, Zola, and France.

453-4 Poetry from Baudelaire to Breton
Symbolists, decadents, and surrealists.

454-4 19th-Century Short Story
Intensive study of such authors as Mérimée, Gautier, Balzac, Flaubert, Maupassant, and Villiers de l’Isle Adam. Prerequisite: FR 322, 332; or permission of instructor.

462-4 20th-Century Literature
The novel. Prerequisite: FR 322, 332; or permission of instructor.

463-4 20th-Century Literature
Drama. Prerequisite: FR 322, 332; or permission of instructor.

464-4 20th-Century Literature
Poetry. Prerequisite: FR 322, 332; or permission of instructor.

465-4 Problems in French Literature
Selected topics in French literature that investigate various themes, myths, genres, literary movements, or characters. Titles vary.

481-4, 482-4 Independent Reading for Advanced Students
Topics vary.

482-4 Independent Reading for Advanced Students
Topics vary.

Geography/GEO

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

149-3 Global Awareness through Map Study
Introduction to maps and their uses as a means to gain global awareness.

201-3 Principles of Physical Geography
Study of the elements of the human natural environment at regional and global scales including examination of the interactions among climate, soils, vegetation, landscapes, and people.

202-3 Principles of Cultural Geography
Study of major cultural elements of the human environment including examination of their spatial interactions and factors influencing their location and distribution.
203-3 Principles of Economic Geography
Examination of the principal geographic factors influencing human activities related to production, exchange, and consumption of goods and services.

317-4 Urban Planning I: Introduction to Urban Planning
Examination of the development of city planning as a professional discipline. Consideration of the contributions to planning by the arts and sciences. Selected activities and functions of contemporary urban planning agencies are viewed from the perspective of current urban problems.

318-4 Urban Planning II: Principles of Planning
Includes the role of planning in urban structures, land use policies, and duties and responsibilities of planning commissions; process of preparing comprehensive plans; population change, the economic base, and employment change; and determinants of future urban structure. Prerequisite: GEO 317 or permission of instructor.

322-4 Principles of Geomorphology
Distribution of world's landforms with emphasis on processes and systems functioning to shape the natural landscape. Attention to three-way interaction among landforms, other physical factors, and people. Prerequisite: GEO 201 or permission of instructor.

325-4 World Regional Geography
Discussion of the nature of selected world regions and their spatial relationships. Emphasizes the unique characteristics of the cultures and landscapes of these regions applying basic geographic concepts.

331-4 Meteorology
Development and application of first principles governing the atmosphere at rest and in motion. Examination of the general circulation and applied meteorology. Prerequisite: MTH 131 or permission of instructor.

334-4 Climatology for Earth Science Teachers
Interaction of weather and climate with various earth systems. Includes observation, measurement, and analysis of meteorological elements and controls. For nonmajors only.

340-4 Urban Geography
General nontechnical introduction to urban geography focusing on major geographic concepts and principles relating to location, function, and structure of urban areas.

343-4 Concepts in Urban Geography
Examination of selected concepts, generalizations, and research methods of urban geography with emphasis on the spatial structure of residential populations, distribution of social pathologies, and segregation of social groups.

353-4 Location Theory
Study of theoretical aspects of the location of human activities. Introduction to theories and concepts regarding location and spatial arrangement of economic activities. Prerequisite: GEO 203 or permission of instructor.

354-4 Geography of Manufacturing
Factors of industrial location using empirical examples. Includes introduction to basic theories and techniques underlying the decision process in manufacturing locations.

361-4 Remote Sensing
Basic survey of imaging remote sensor types and their operational characteristics including sensors for the ultraviolet, visual, infrared, and microwave portions of the electromagnetic spectrum. Prerequisite: GEO 201 or permission of instructor.

362-4 Remote Sensing of the Environment
Application of remote sensing techniques to environmental and resource problems. Emphasis on optimizing sensor selection to enhance image information content.

365-5 Cartography
Principles of map projections, their construction, and their use in illustrating geographic relationships. Includes methods of design compilation and graphic representation of data.

370-4 Regional Geography
Physical and cultural analysis of major and minor world regions. Topics vary.

375-4 Environmental Conservation
Economic and geographic appraisal of resource conservation in the world, emphasizing an analytical approach to solving such contemporary problems as human population growth, environmental quality, recreation and open space, and resource management. Prerequisite: GEO 202 or 203.

385-5 Geographic Methodology
Examination of the nature, tools, methods, and techniques of geographic analysis. Emphasis on design, compilation, interpretation, and presentation of research materials.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of geography. Topics vary.

414-4 Urban Planning Seminar
Examination of urban plans and planning proposals. Includes future land use plans, community facilities and public utility plans, and traffic and circulation plans. Considers modern theories of planning and the planning and design of new communities.
419-4 Urban Planning III: The Land Use Plan
Process of preparing comprehensive urban plans. Methods for assessing land use conditions, housing patterns, and urban deterioration. Students participate in the development of a land use plan for selected area. Prerequisite: GEO 312.

430-4 Climatology I
Observation, measurement, and analysis of climatic elements and controls, climatic classification, and relation of climate to human economic and social activities.

432-4 Climatology II
Principles of physical and dynamical climatology, Evaluation of local and regional transports and conversions of energy in the earth-atmosphere system. Prerequisite: GEO 331.

455-4 Geography of Transportation
An analysis of spatial aspects and structural characteristics of transport networks, the movement of goods, and their relationship to regional economic structures. Prerequisite: GEO 203 or 353 or permission of instructor.

463-4 Geographic Applications for Remotely Sensed Data
Application of geographic methodology to problems employing photographic and machine-processed multispectral scanner data in contemporary use in academic research, environmental analysis, and planning. Prerequisite: GEO 362 or permission of instructor.

479-5 Landscape Analysis for Urban Planning
A systematic approach to landscape analysis for urban site planning using basic data sources. Emphasis is on landscape capabilities for satisfying human needs and uses. Prerequisite: GEO 312 or permission of instructor.

481-1 to 4 Special Problems in Geography
Research and problems designed for specific needs and talents of students. Topics vary.

482-1 to 4 Special Problems in Geography
Research and problems designed for specific needs and talents of students. Topics vary.

484-3 to 4 Biogeography
(Also listed as BIO 484.) Introduction to factors affecting the geographical distribution of plants and animals. Students registering for three credit hours attend lectures only; registration for four credit hours requires an additional laboratory section. Prerequisite: GEO 201, 330, or permission of instructor.

486-3 Foundations of Geography
A study of the evolution of the discipline through analyses of the approaches, emphases, methodologies, paradigms, and traditions in geography. Prerequisite: completion of departmental core courses or senior standing.

492-1 to 6 Geography Internship
Provides geography majors 15 clock hours of practical experience under academic supervision each week during the quarter with a cooperating public agency or private firm. Topics vary. For geography majors only.

Geological Sciences/GL
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

105-3 The Planet Earth
Introduction to the composition and structure of the earth through a study of the physical and chemical processes (weathering, sedimentation, and the plate tectonic cycle) that have produced the earth, its minerals, rocks, landforms, and economic mineral fuel deposits. Corequisite: GL 115.
106-3 The Evolving Earth
Exploration of time in geology through a study of the history of the earth and of life as revealed by the physical and biological evidence recorded in the rocks. Corequisite: GL 116.

107-3 The Earth and Human Affairs or Geologic Development of Ohio: Rocks, Fossils, and Resources
Examination of the interactions of humans with the earth in terms of geological hazards and natural resources. Also offered as Geologic Development of Ohio: Rocks, Fossils, and Resources: a field course emphasizing the geology of Ohio. Corequisite: GL 117.

111-4.5 Physical Geology Honors I
Comprehensive treatment of the dynamic systems and materials of the earth. External processes and resulting land forces are also studied. Three hours lecture, three hours lab.

112-4.5 Physical Geology Honors II
Comprehensive treatment of external and internal processes of the earth and the resulting landforms. Introduction to earth resources and other earth-like planets. Three hours lecture, three hours lab. Prerequisite: GL 111.

113-4.5 Historical Geology Honors
Summary of current thought about the earth’s history from its origin to the present. Topics include movement and evolution of the earth’s crust, world climatic changes, and evolution of plants and animals. Three hours lecture, three hours lab. Prerequisite: GL 111.

115-1 The Planet Earth Laboratory
Study of rocks and minerals: field trips; map interpretation; and practical work on ground water, glaciation, and structural geology. Laboratory component for GL 105.

116-1 The Evolving Earth Laboratory
Exercises in time measurement, correlation of stratified rocks, evolution and biological diversity in the fossil record, and paleontology. Laboratory component for GL 106.

117-1 The Earth and Human Affairs Lab
Exercises and experiments on geologic hazards (earthquakes, floods, mass movements), resources (soil and water), and mineral economics. Also offered as Geologic Development of Ohio laboratory. Laboratory component for GL 107.

120-12 Honors Geology—Physical, Historical Field
Offers the equivalent of a three-quarter introductory geology sequence to honors students during one summer. Five weeks of double lectures and labs are followed by a five-week field trip to the northern Rocky Mountains.

199-1 to 4 Directed Studies
Research and problems related to specific needs and talents of students.

201-4 Hydrology and Water Resources
Hydrologic cycle: emphasizes past, present, and future problems in flood control, water pollution, and water resource development. Three hours lecture, two hours lab or field trip. Prerequisite: MTH 126 or 127.

251-3 Physical Geology and Geomorphology I
Comprehensive treatment of the dynamic systems and materials of the earth. External processes and resulting land forces are also studied. Corequisite: GL 252.

252-1.5 Physical Geology and Geomorphology Laboratory I

253-3 Physical Geology and Geomorphology II
Comprehensive treatment of external and internal processes of the earth and the resulting landforms. Introduction to earth resources and other earth-like planets. Prerequisite: GL 251, 252.

254-1.5 Physical Geology and Geomorphology Laboratory II
Laboratory for topographic and geologic map and geologic cross sections interpretation to recognize geological structures and their relation to geomorphology and landforms. Prerequisite: GL 251, 252. Corequisite: GL 253.

255-3 Historical Geology
History of the earth, including geologic history of all of earth’s continents. Review of origin of earth, development of the rock record, evolution of diverse life forms to produce a biological and physical history of the earth.

256-1.5 Historical Geology Laboratory

304-3 Earth Resources and Environmental Quality
Study of earth resources as the economic base of civilization. Natural geologic processes and geochemical cycles of global change are compared with human-induced impact on environment. Emerging trends in technology and policy matters and their influence on environmental quality are analyzed. Prerequisite: GL 105 and 106 or equivalent.

309-4 Geologic Hazards and Environmental Quality
Hazards from geologic materials: reactive minerals, the asbestos controversy, radioactive and toxic gases. Hazards from geologic processes: earthquakes, volcanic eruptions, slope processes, subsidence, floods, and coastal hazards. Geologic hazards monitoring, mitigation, and avoidance. Risk evaluation. Three hours lecture, two hours lab or field trip.
310-3 Issues in Science
(Also listed as BIO 310, CHM 310, PHY 310, and MTH 310.) A writing-intensive course dealing with issues in science. Prerequisite: ENG 101, 102: a first-year science course.

311-4.5 Introduction to Structural Geology
Concepts of stress, strain, and material behavior used to describe and explain how rocks deform. Depositional structures. Three hours lecture, three hours lab.

342-4.5 Fossil Vertebrates and Plants
Morphology, geologic record, and geographic distribution of major vertebrate and plant groups characterized by significant fossil representation. Three hours lecture, three hours lab. Prerequisite: (recommended preparation) GL 255 and GL 255.

345-4.5 Concepts in Geology
Accelerated treatment of principles of physical and historical geology pertinent to teaching students in grade school (K-8). Includes laboratory exercises that will be effective for teaching K-8 students and can be used in a self-contained classroom. Elementary education majors only. Prerequisite: PHY 245, CHM 245.

381-6 Mineralogy and Crystallography
Lecture: Crystal properties and crystal classes. Study of approximately 100 important minerals. Lab: stereoscopic and gnomonic projections to identify crystal forms; physical properties used to identify minerals in hand sample. Three hours lecture, six hours lab.

383-4.5 Sedimentary Petrology
Introduction to the optical properties of common minerals. Survey of sedimentary rocks in hand specimen, thin section, and field occurrence. Three hours lecture, three hours lab. Prerequisite: GL 381 or GL 401.

385-4.5 Igneous and Metamorphic Petrology
Origin of igneous and metamorphic rocks. Lab: use of thin sections and hand specimens for mineral identification, rock structures, and classifications. Three hours lecture, three hours lab. Prerequisite: GL 383.

399-1 to 6 Special Problems
Research problems for specific needs and talents of students. Topics vary.

401-4.5 Rocks and Minerals
Study of the structure, symmetry, and composition of minerals and the composition, classification, and origin of rocks. Lab emphasizes mineral and rock identification. Prerequisite: GL 252.

405-4 Ground-Water Monitoring and Remediation
Principles of groundwater monitoring and cleanup system design. Theory and field practices for monitoring well drilling/installation, lysimeter installation for natural and contaminated groundwater, etc. Field visits to sites with contaminated aquifers undergoing remediation.

420-3 Regional Tectonics
Study of the structure of the earth as revealed by solid earth geophysics and dynamics of internal geologic processes, and of the large-scale tectonic structure of the North American continent obtained through the Decade of North American Geology Project. Prerequisite: GL 311 or permission of the instructor.

421-3 Ground Water Law and Regulatory Principles
Case study approach to understanding current federal, state, and local ground water law and regulations.

422-5 Introduction to Applied Geophysics
(Also listed as see PHY 422.) Introduction to gravity, magnetic, seismic, and electrical methods of subsurface investigation. Three hours lecture, four hours lab. Prerequisite: MTH 229 or permission of instructor.

423-4 Seismic Exploration
Study of the theory, observation, and analysis of seismic phenomena as applied to geologic exploration. Three hours lecture, two hours lab. Prerequisite: GL 422 or permission of instructor.

424-4 Gravity and Magnetic Exploration
(Also listed as PHY 424.) Study of the theory of earth's gravitational and magnetic fields and the application of these principles to resource exploration. Three hours lecture, two hours lab.

426-1 Geophysics Seminar
Literature survey and presentations by students on selected topics in geophysics. Prerequisite: GL 400 or 422.

427-4 Regional Structural Synthesis
Synthesis of diverse structural, geophysical, and remote sensing data and their application to regional tectonic interpretation and natural resource evaluation. Prerequisite: GL 311/511, 312/693.

428-0.5 to 2 Geology Colloquium
Selected geological topics discussed by students, guest speakers, and faculty. May be taken for letter grade or pass/unsatisfactory.

431-4 Electrical Methods in Environmental Geophysics
The principles and practices of acquisition and interpretation of data from electrical and electromagnetic geophysical techniques. Prerequisite: GL 422 or permission of instructor.

432-4.5 Sedimentary Systems and Sequences: Carbonates
Interpretation of ancient and modern carbonate systems using sequence stratigraphic principles. Carbonate facies models as predictive tools for hydrocarbon exploration and aquifer modeling. Composition, origin, and diagenesis of carbonate rocks. Prerequisite: GL 382 or 487 or equivalent.
433-1 to 6 Geophysical Field Research
Geophysical research participation in a project of the department. The content and techniques will depend on the particular project, but will normally have an extensive component of field data acquisition. May be repeated for credit. May be taken for a letter grade or pass/unsatisfactory.

434-9 Field Geology
Geologic phenomena illustrated in the field. Introduction of mapping techniques and application of many geological disciplines to geologic analysis.

436-3 Diagenesis of Sedimentary Rocks
Theory and application of petrographic techniques to studies of carbonate and clastic rocks, with emphasis on diagenesis and porosity development. Prerequisite: GL 487 or equivalent.

437-4 Subsurface Digital Imaging and Processing
Digital processing and visualization of seismic reflection and ground penetrating radar data. Two hours lecture, four hours lab. Prerequisite: GL 423.

438-3 Seismic Interpretation
Interpretation methods for seismic reflection data are studied with emphasis on structural and stratigraphic interpretation for petroleum traps. Prerequisite: GL 423 or permission of instructor.

441-4 Advanced Facies Analysis
Facies models as prediction tools in oil and gas exploration, interpretation of seismic 2D and 3D data, and resolving ground water and environmental problems in nonregolith aquifers. Prerequisite: GL 251, 253, 487 or equivalents, or permission of instructor.

444-4 Formation Analysis
Theory, application, and interpretation of geophysical logs with emphasis on their use in correlation and determination of porosity, permeability, and fluid content of subsurface formations. Three hours lecture, two hours lab.

445-4 Petroleum Geology
Hydrocarbon source rocks, maturation, and migration. Reservoir rocks and traps. Fluids in the reservoir: gas, oil, water, and relationships. Exploration for and production of hydrocarbons. Review of major petroleum basins and deposits.

446-3 Sequence Stratigraphy
Provides a firm grounding in the mechanisms that produce sea-level change, how sediments respond to these changes, and how the architecture of basins develop over time.

450-4 Hydrogeology
Provides a fundamental understanding of basic hydrological systems including ground water flow and chemistry, surface water hydrology, unsaturated flow, and meteorology. Students are expected to understand basic physics and calculus.

454-4 Ground-Water Flow and Transport
Covers the occurrence and movement of ground water, and the advection and dispersion of contaminants in groundwater flow regimes. Lab introduces interpreting the hydraulic properties of groundwater flow regimes from field data. Three hours lecture, two hours lab. Prerequisite: MTH 230, PHY 244.

455-4 Hydrogeochemistry
Focuses on the chemical interactions between natural waters and their geologic environments. Included are chemical principles, carbonate system, silicate equilibria and weathering, redox reactions, isotope hydrology, and hydrogeochemical modeling. Prerequisite: CHM 121, 122, 123 or CHM 191, 192, 193.

456-4 Engineering Geology I
Principles of engineering geology—applications of geologic principles to engineering works. Impact and interrelationship of geologic processes on humans’ construction efforts.

461-4 Geologic and Environmental Applications of GIS
Introduces principles and essential elements of Geographic Information System (GIS). DRASTIC concept of ground water vulnerability to contamination is incorporated to illustrate data analysis, map algebra, and decision making using GIS. May be taken for a letter grade or pass/unsatisfactory.

462-4 Process Geomorphology
Study of the processes that create and modify landforms. Classifications of landforms and what they reveal of past geologic processes and climates. Prerequisite: GL 251, 252, 253, 254 or GEO 201 and GEO 322.

463-4 Geologic and Environmental Application of Remote Sensing—Aerial Photographs
The use of aerial photographs for geological mapping, exploration of mineral resources, hydrogeology, hazard monitoring, environmental problems, and land use monitoring and analysis.

468-4 Ground Water Contamination
Behavior of organic and inorganic pollutant in the vadose zone and saturated subsurface including vapor migration, dissolution, and sorption of LNAPLs and DNAPLs; chemical and microbiological degradation; and fate of chlorinated and other hydrocarbons. Prerequisite: GL 450/650 or GL 455/655.

469-3 Site Remediation
Chemical and microbiological degradation of pollutants in subsurface, diagnosis and assessment of contaminated sites. Concepts and techniques for LNAPL and DNAPL remediation: pump-and-treat, soil vapor extraction, bioventing/sparging, chemical treatment, solvent extraction, and bioremediation. Prerequisite: GL 468/668.
German/GER

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

104-1 First-Year German
Study of the vocabulary and structure of the German language; practice in conversation, reading, and writing.

102-4 First-Year German
Study of the vocabulary and structure of the German language; practice in conversation, reading, and writing.

103-4 First-Year German
Study of the vocabulary and structure of the German language; practice in conversation, reading, and writing.

111-4 Essentials of German
Introduction to German with an emphasis on speaking the language.

115-4 German for Reading Knowledge
Introduction to all main points of grammar; practice in recognizing grammatical constructions and using a dictionary; and selected readings of adult-level texts from various fields. May be taken for letter grade or pass/unsatisfactory.

150-4 German Grammar Review
A thorough review of German grammar with an emphasis on oral practice.

201-4 Second-Year German
Grammar review, reading, and discussion of selected texts with practice speaking and writing the language. Prerequisite: GER 103 or equivalent.

202-4 Second-Year German
Grammar review, reading, and discussion of selected texts with practice speaking and writing the language. Prerequisite: GER 201 or equivalent.

203-4 Second-Year German
Grammar review, reading, and discussion of selected texts with practice speaking and writing the language. Prerequisite: GER 202 or equivalent.

215-4 Scientific German
Intensive reading in all areas of expository and technical German. Prerequisite: GER 103 or equivalent.

311-4 German Conversation
Emphasis on the culture of the German-speaking world. Prerequisite: GER 203 or equivalent.

312-4 German Conversation
Emphasis on the culture of the German-speaking world. Prerequisite: GER 203 or equivalent.

321-4 German Composition
Oral and written composition in German; translations from English into German. Further grammar study. Prerequisite: GER 203 or equivalent.

322-4 German Composition
Oral and written composition in German; translations from English into German. Further grammar study. Prerequisite: GER 203 or equivalent.

323-4 German Composition
Oral and written composition in German; translations from English into German. Further grammar study. Prerequisite: GER 203 or equivalent.

325-4 Business German
An introduction to the language of business German with insight into Germany's place in the global economy. Prerequisite: GER 203.

331-4 Survey of German Literature
Historical survey of German literature from its beginning to the present. 331: Literature of the Middle Ages, Renaissance, Reformations, Enlightenment, and Storm and Stress. 332: Classicism, Romanticism, Poetic Realism, and Modern Period. Prerequisite: GER 312 and 322 or permission of instructor.

332-4 Survey of German Literature
Historical survey of German literature from its beginning to the present. 331: Literature of the Middle Ages, Renaissance, Reformations, Enlightenment, and Storm and Stress. 332: Classicism, Romanticism, Poetic Realism, and Modern Period. Prerequisite: GER 312 and 322 or permission of instructor.
GER 312, 322, and 332 or permission of instructor are prerequisites for the following advanced courses:

351-4 German Culture and Civilization
Survey of cultural influences and of political, social, economic, religious, educational, and cultural institutions.

361-4 Introduction to Germanic Folklore
Survey of Germanic folklore as it relates to literature.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of German. Topics vary.

403-4 Advanced Studies: Language/Civilization
Topics vary. Conducted in German.

405-4 Early German Literature
German literature from the earliest times to the reformation.

406-4 Renaissance and Reformation
Representative German authors of the period.

410-4 Baroque
Representative German authors of the period.

415-4 German Literature of the 18th Century
415: Representative authors in Rococo, Enlightenment, and Storm and Stress. 416: Representative works of Goethe and Schiller.

416-4 German Literature of the 18th Century
415: Representative authors in Rococo, Enlightenment, and Storm and Stress. 416: Representative works of Goethe and Schiller.

417-4 German Romanticism
Study of the romantic movement with representative works of Schlegel, Novalis, Wackenroder, Tieck, Eichendorff, Hoffmann, and others.

418-4 Goethe's Faust
Intensive study of Faust I and Faust II.

425-4 German Literature of the 19th Century
Readings and reports in 19th-century literature—prose. Representative works of Eichendorff, Hoffmann, Keller, Meyer, Storm, Fontane, and others.

426-4 German Literature of the 19th Century
Readings and reports in 19th-century literature—drama. Representative works of Tieck, Kleist, Grillparzer, Hebbel, Büchner, and others.

427-4 German Literature of the 19th Century
Readings and reports in 19th-century literature—poetry. Representative works of Heine, Drosio-Hulshoff, Mörike, Dohm, Liliencron, and others.

431-4 German Literature of the 20th Century
Readings and reports in 20th-century literature—prose. Representative works of Hesse, Mann, Kafka, and others.

432-4 German Literature of the 20th Century
Readings and reports in 20th-century literature—drama. Representative works of Schnitzler, Hofmannsthal, Kaiser, Toller, Brecht, and others.

433-4 German Literature of the 20th Century
Readings and reports in 20th-century literature—poetry. Representative works of Rilke, George, Trakl, Benn, and others.

434-4 Thomas Mann
Studies of the writings of Thomas Mann.

442-4 History of the German Language

450-1 to 4 Undergraduate Research in German
Topics vary.

481-4 Independent Reading for Advanced Students
Topics vary.

482-4 Independent Reading for Advanced Students
Topics vary.

Greek/GR

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

Students who have studied Greek elsewhere should consult the Department of Classics for appropriate course level. Placement and proficiency tests can be given.

101-4 Beginning Greek
Essentials of the Greek language.

102-4 Beginning Greek
Essentials of the Greek language.

103-4 Beginning Greek
Essentials of the Greek language.

201-4 Intermediate Greek
Review of essentials and reading for comprehension in selected authors. Prerequisite: GR 103 or equivalent.

202-4 Intermediate Greek
Review of essentials and reading for comprehension in selected authors. Prerequisite: GR 201 or equivalent.

The following courses offer a variety of authors and topics; they may be repeated for credit by number, although not by content. Students should consult the department for the scheduled subjects and authors. GR 202 or equivalent is prerequisite for all 300- and 400-level language courses.

351-4 Readings in Greek Drama
Aeschylus, Sophocles, Euripides, Aristophanes, and Menander. Study of at least one play in Greek. Topics include origin and development of tragedy, drama as a reflection of contemporary events, and development of new comedy.

353-4 Readings in Greek Poetry
Greek epic and lyric poetry: epics of Homer and Hesiod, the Hymns, the early lyric poets such as Archilochus and Sappho, and the Hellenistic poets. Topics for investigation include structure and technique of oral epic, the didactic tradition, lyric meters and diction, and the development of pastoral poetry.
399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of Greek. Topics vary.

451-4 Readings in Greek Philosophy
Plato, Aristotle, Epicurus, Epictetus, and Marcus Aurelius. Topics include pre-Socratic and the development of philosophical vocabulary, the sophist movement, the Cynic tradition, and the development of popular philosophy. Titles vary.

453-4 Readings in Greek History and Biography
Herodotus, Thucydides, Xenophon, Polybius, and Ptolemy. Topics for investigation include methods of composition, influences on historiography from the sophists and philosophers, the development of Greek historical writing, and supplemental evidence from inscriptions and nonliterary sources. Titles vary.

455-4 Readings in Greek Politics and Political Theory
Lysias, Demosthenes, Isocrates, Old Oligarch, Plato, Xenophon, and Aristotle. Topics for investigation include development of political ideas and vocabulary, nonliterary sources for our knowledge of Greek civil life, and influences on Roman theories and practices.

457-4 Reading in Greek Prose Narrative
Readings of Greek prose authors on topics such as the scientific or pseudoscientific writings of Hippocrates, Euclid, Archimedes, and Ptolemy; travel commentary of Strabo and Pausanias; essays of Athenaeus; and fiction of Lucian.

481-1 to 4 Independent Reading
Titles vary.

Health/HLT

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

416-1 to 4 Special Topics in Health
Topics vary. Specific titles announced in quarterly class schedule. May be taken for a letter grade or pass/unsatisfactory.

Health and Education/HED

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

230-4 Personal Health
Discussions of personal health problems in adolescents through the lifespan including the six CDC risk areas of injuries, tobacco, alcohol, drug use, sexual behavior that leads to pregnancy, STDs, diet, and physical activity.

330-3 School and Community Health Services
Discusses problems of chronic and communicable diseases, environmental health, world health, and the school and community agencies involved in their solutions through assessment, planning, implementing, and evaluating school health programs.

331-4 Health Education for Early and Middle Childhood
Covers students pre-K through ninth grade. Promoting positive lifestyles; the comprehensive school health program; planning, organizing, and evaluation of curriculum; goals and objectives for health teaching; teaching and learning plans; and controversial issues.

382-3 Curriculum and Methods in Health Education
Curriculum development (pre-K–12) in health education including aims, objectives, implementation, evaluation, and unit planning. Provides criteria for the selection of specific health education content areas and teaching methods across the lifespan. Prerequisite: admission to teacher education program or permission of instructor.

431-3 Human Sexuality for Educators
A course in human sexuality for health educators who deal with communication, sexual behavior, birth control, abortion, pregnancy, childbirth, premarital sex, ethics, homosexuality, marriage, divorce, parenting, sexual health, coercive sex, and sexual assault.

432-3 Death, Dying, and Grieving
(Also listed as RHB 432.) Course in death, dying, and grieving for health educators who deal with grief and loss in situations such as death, dying, survivorship, children and loss, second marriages, suicide, and other events of trauma.

Health, Physical Education, and Recreation/HPR

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

100-1 to 2 Physical Education—Beginning
Fundamental skills and knowledge of one particular activity. Competency-based approach. Includes courses for disabled students. Students should check competency levels posted in physical education building before enrolling.

101-2 Physical Education—Intermediate
Intermediate level of skills and knowledge in one particular activity. Competency-based approach. Students should check competency levels posted in physical education building before enrolling.
102-3 Physical Education—Advanced
Advanced level of skills and knowledge in one particular activity. Competency-based approach. Includes courses in life saving and water safety instruction. Students should check competency levels posted in physical education building before enrolling.

151-4 Total Fitness Lifestyle (TFL)
Assessment, prescription, participation, and reassessment of fitness variables including cardiovascular fitness, strength, blood lipids, and body composition.

170-3 Principles of Physical Fitness
Instruction concerning principles of physical fitness including aerobic fitness, muscular fitness, and evaluation of current concepts regarding diet and exercise. Demonstrations of measuring aerobic and muscular fitness, body composition determination, and graded exercise testing. Must have attended TFL orientation to enroll.

200-1 to 3 Teaching (Sport)
Develop methods of teaching fundamental skills and knowledge of a particular sports activity. Emphasizes a variety of teaching skills and classroom management techniques.

211-3 Motor Skills of Young Children
Examination of motor skills used by young children to develop a foundation of fundamental movement patterns and skills. Several basic skills are defined and illustrated.

212-4 Adapted Physical Education and Recreation
Provides an overview of the etiological, physical, and psychological considerations of disabilities. Methods of adapting activities and supervised field experiences in physical education for individuals with disabilities.

213-3 Teaching Adapted Aquatics
Red Cross certification course in adapted aquatics. Concepts are given regarding teaching techniques, disabilities, and basic rescues specific to the population involved. Prerequisite: HPR 212.

214-3 Adapted Physical Activity
Rules and certification requirements of the various athletic opportunities for exceptional populations. Includes discussions of adaptive devices and special facilities used for these programs. Prerequisite: HPR 212.

220-3 Fundamental Movement
Examination of basic content areas of physical education for grades K–6. Includes motor activities that aid the elementary-age child in developing fundamental movements and sports skills. Students must demonstrate cognitive and psychomotor abilities.

240-2 Problems in Health Education
Discussion of problems related to health education. Much of the course content is determined by students enrolled through individualized assignments.

241-3 Introduction to Health, Physical Education, and Recreation
Introduces the developing professional to the nature and scope of health, physical education, and recreation. Includes degree and licensure requirements, professional organizations, career opportunities, historical perspectives, trends and issues in HPR and related fields.

242-2 Problems in Health, Physical Education, and Recreation
Current issues in health, physical education, and recreation. Students work on individual problems related to the health, physical education, and recreation program at Wright State.

250-4 Basics of Anatomy and Physiology I
A study of anatomy and physiology correlating both structure and function of the human body. Topics include organization, skeletal system, muscular system, nervous system, circulatory system, and endocrine system. Three hours lecture, two hours lab.

251-4 Basics of Anatomy and Physiology II
A continuation of HPR 250. Topics include respiration, exercise, digestion, metabolism, urinary system, acid base balance, reproduction, and immune system. Prerequisite: HPR 250.

260-3 First Aid

281-4 Physical Education for Early and Middle Childhood
Curriculum teaching methods and materials in physical education for early and middle childhood (ages 3–14). Emphasis on goals of effective programs, activity for optimal growth development, content areas, and principles for teaching motor skills.

310-4 Developmental Activities for Children
Movement activities that aid the developmentally delayed as well as the normal child in developing motor skills. Equipment and materials necessary to provide appropriate movement activities.

312-3 Motor Skills for Individuals with Multiple Disabilities
Sensory-motor skill development of individuals as it relates to perceptual enhancement, IFSP and IEP development, mobility skills, and vocational fitness from early childhood to adulthood. Intended for students in adapted physical education, early childhood education, special education, and related disciplines.
340-3 Organization and Administration of Health, Physical Education, Recreation, and Athletic Programs
Organizational techniques, administrative procedures, and principles of managing school health education, physical education, recreation, and athletic programs. Includes scheduling, facilities, personnel, programs of instruction, and public relations. Prerequisite: HPR 241.

354-3 Psychology of Sport
Provides information to help the prospective teacher, coach, or sports medicine professional to effectively apply behavioral science principles to the performance aspects of sport and human movement.

355-4 Applied Exercise Physiology
Practical applications in exercise physiology for the physical educator, coach, and athletic trainer. Methods of conditioning, training, implementation, and other special considerations included.

362-3 Nutrition for Fitness and Sport
Nutrient and food energy needs of the individual who is physically active during the life cycle. Tissue maintenance, growth and development, immune function, energy development, the food pyramid, and sound dietary practices are investigated.

380-2 Health Instruction
Theory and application of health instruction including materials, curriculum development, and discussions of a variety of teaching methods. Prerequisite: HPR 230, 330; ED 214, 216, 218, 220, 221, 223, 327 (ED 327 may be taken concurrently).

381-3 Curriculum and Methods in Physical Education
Curriculum development in pre-K physical education: aims, objectives, implementation, evaluation, teaching methods, daily and unit lesson planning. Self-assessment and problem solving techniques allow student to reflect upon and revise teaching practices. Prerequisite: admission to teacher education program or permission of instructor.

383-3 Methods of Teaching Outdoor Activities
Designed to provide knowledge and practical application of teaching and leading outdoor activities relating to the field of physical education and recreation. Prerequisite: ED 214, 216, 218, 220, 221, 223, 327 (ED 327 may be taken concurrently).

410-4 Psychomotor Assessment of Exceptional Children
Emphasis on developing knowledge and skill in diagnosing motor, physical, and sensory deficiencies in exceptional children. Administrative procedures and interpretation of numerous assessment instruments are covered. Prerequisite: HPR 212.

419-5 to 15 School Nursing Practicum
Supervised experiences in the public school. Prerequisite: HPR 440.

430-1 to 3 Coaching Theory
Theory, methods, skills, strategies, organization, psychology, ethics, conditioning, and general aspects of teaching and coaching a particular sport. Typical sports covered include baseball, basketball, and soccer.

440-3 School Health Services
Study of health services provided by our public schools; techniques for increasing students' knowledge of healthful practices.

481-3 Research Methods in Physical Education
Introduction to basic research procedures in health, physical education, and recreation including a review of the statistical procedures pertinent to physical education. The format for thesis writing is also discussed. Prerequisite: BIO 456.

488-1 to 6 Independent Study
Independent reading, writing, and/or reporting in areas related to health, physical education, or recreation. Topics vary.

489-1 to 6 Workshop in Health, Physical Education, and Recreation
Intensive study of content, curriculum, method, or materials designed to meet the needs of preservice and in-service professionals in health, physical education, and recreation. Titles vary.

History/HST

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-3 The Western World: The Ancient and Medieval Eras
Examination of the character of the premodern world from prehistory through the 14th century with special attention to those aspects of ancient and medieval life that had the greatest effect on the development of Western society, politics, and culture.

102-3 The Western World in Transition: The 14th to 18th Centuries
Examination of the roots of the modern Western world emphasizing the revolution in economic, political, religious, and demographic realities that occurred between the 14th and 18th centuries. Prerequisite: HST 101.

103-3 The Modern Western World: The 19th to 20th Centuries
Examination of the nature and consequences of modernization—its failures, accomplishments, and problems with special attention to the phenomena that shaped the Western world of the 19th and 20th centuries. Prerequisite: HST 102.
199-1 to 4 Studies in Selected Topics
Problems, approaches, and topics in the field of history. Topics vary.

211-3 American Civilization
Thematic survey of events, forces, groups, and individuals that contributed to and helped to shape an American civilization on the North American continent. Colonial foundations to 1877.

212-3 American Civilization
Thematic survey of events, forces, groups, and individuals that contributed to and helped to shape an American civilization on the North American continent. 1877 to the present.

214-3 African-American History
Survey of black people in American society from colonial slave trade to the present. African roots to 1877.

215-3 African-American History
Survey of black people in American society from colonial slave trade to the present. Reconstruction to the present.

218-3 History of Ohio: Frontier to Factory
French, British, American, and Indian conflict for control of Ohio; movement to statehood; evolution of political, economic, and cultural life from rural setting to industrialization and urbanization. Prehistory to 1871.

219-3 History of Ohio: Frontier to Factory
French, British, American, and Indian conflict for control of Ohio; movement to statehood; evolution of political, economic, and cultural life from rural setting to industrialization and urbanization. Since 1871.

220-4 Introduction to Gender History: Special Topics
Courses will survey special topics in gender history. Topics may include masculinity, femininity, sexuality, family, and women's history. Focus may be on one nation, region, or a comparative perspective. May be taken more than once for credit under different titles. Also listed as WMS 300.

301-4 Research Seminar
Students will learn to use various research tools and techniques and become proficient in presenting their research in a form acceptable to the scholarly community. Prerequisite: HST 101, 102, 103, 211, and 212.

400-4 to 12 History Honors Project
May range from library research to field training.

405-4 Ancient History
Courses offered under this number examine selected problems in Roman history to the death of Constantine in A.D. 337. Topics vary.

410-4 The Middle Ages
Studies the decline of the Roman Empire to ca. 1450. Topics vary and can include European, Islamic, and Byzantine civilizations.

415-4 Medieval and Early Modern European History
Examines selected problems in European history from the late Middle Ages through the Counter-Reformation. Topics include the Renaissance and Reformation.

425-4 Modern European History
Examines selected problems in European history from the late Middle Ages through the Counter-Reformation. Topics include the Renaissance and the Reformation.

435-4 British History
Courses offered under this number examine particular periods of British history (e.g., modern Britain) or topics (e.g., British constitutional history). Topics vary.

445-4 Middle Eastern History
Courses offered under this number examine the Balkans and the Middle East from the Middle Ages to the present. Topics may include Byzantine history, the Crusades, and the Middle East today. Topics vary.

455-4 Latin American History
Courses offered under this number examine selected Latin American nations (e.g., Mexico), particular topics (e.g., Authoritarianism), and Colonial Latin America. Titles vary.

460-4 Southeast Asian History
Examines periods of history in nations located between China and India (e.g., Vietnam) or selected topics (e.g., nationalism). Titles vary.

465-4 East Asian History
Examines various periods of Chinese, Japanese, and other East Asian histories or special topics.

470-4 Early American History
Examines colonial, revolutionary, and early republic periods of American history. Topics vary.

475-4 19th-Century United States History
Courses offered under this number examine distinct periods in the 19th century (e.g., Civil War and reconstruction) and major topics such as slavery. Topics vary.

480-4 20th-Century United States History
Courses offered under this number examine particular stages of the 20th-century American experience (e.g., the Progressive Era) or selected topics (e.g., the civil rights movement). Topics vary.

485-4 Special Topics in United States History
Courses offered under this number allow intensive analysis of topics drawn from the entire range of the American experience such as religion, diplomacy, women, immigration, and urbanization. Topics vary.
486-4 Gender History: Special Topics
Courses will allow intensive analysis of subjects in gender history. Topics may include masculinity, femininity, sexuality, family and women’s history. Focus may be on one nation, region or comparative perspective. Topics may be taken more than once for credit under different titles. Also listed as WMS 400.

487-4 Introduction to Public and Applied History
Introduces students to the origins, nature, and varieties of public history and to careers in the field. Explore issues of ethics and politics in public history. Enrollment restriction: upper division only.

490-4 Topics in African-American History
Examines topics drawing from the African-American experience; may include black ideology and leadership, racial tension in urban society, and the civil rights movement. Topics vary. Prerequisite: HST 211, 212; or HST 214, 215.

491-1 to 4 Independent Readings
Faculty-directed readings in a field of students’ choice.

495-4 Comparative History
Courses offered under this number compare developments or movements in different parts of the world and/or different times in history such as revolutions, slave systems, religious movements, or other human experiences that transcend a particular time or place. Topics vary.

498-4 Historiography (American or European)
Introduction to the work of representative historians and important theories of historical interpretation.

International Business/IB
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

480-1 to 3 Independent Study in International Business
Reading or research in a select field of international business. Topics vary. Enrollment restriction: instructor permission only.

480-1 to 6 Special Topics in International Business
Topics vary. May be taken for letter grade or pass/unsatisfactory. (Previously listed as BUS 480.)

481-1 to 6 International Trade Internship
Practical application in international trade. Integrates academic learning with work experiences. Students apply classroom learning in an organizational setting. Limited to international business majors with senior status. Prerequisite: permission of instructor.

486-3 International Trade Management
Overview and application of the concepts and principles required to conduct import and export operations within the firm. Students apply international trade management concepts through participation in an international trade team project. Prerequisite: MGT 302; MKT 302; FIN 302.

Industrial and Systems Engineering/ISE
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

195-2 Fundamentals of Industrial and Systems Engineering
Provides students with an overview of how engineers design, develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy. (Previously listed as HFE 195.)

300-0 Honors Program Seminar
An orientation course intended for juniors who have demonstrated exceptional academic ability and desire to conduct meaningful independent research or solve unique engineering design projects during their senior year. Meets five times during quarter. Graded pass/unsatisfactory. (Previously listed as HFE 300.)

301-4 Statistical Methods for Testing, Development, and Manufacturing I
Presentation of statistical techniques as applied to engineering testing, development, and manufacturing. Introduces and applies probability distributions, measures of association, inferences on responses, and basic experimental design. Emphasizes application of statistical tools. Prerequisite: MTH 230 or equivalent. (Previously listed as HFE 301.)

302-4 Statistical Methods for Testing, Development, and Manufacturing II
Continuation of HFE 301. Focus on analysis techniques for multiple variables, including ANOVA and multiple regression, as applied to engineering testing, development, and manufacturing. Process analysis and improvement techniques presented, along with tools for reliability analysis. Prerequisite: HFE 301 or ISE 301. (Previously listed as HFE 302.)

306-4 Human Factors in Engineering and Design
Introduction to the study of human factors in the design and operation of machine systems. Prerequisite: PSY 105, 110, and MTH 230. (Previously listed as HFE 306.)
307-4 Industrial Ergonomics
Introduction to the application of ergonomic principles to the industrial environment. Includes ergonomic planning and implementation, the work environment, NIOSH work factors, and workstation and equipment design. Prerequisite: HFE 306 or ISE 306; ME 212. (Previously listed as HFE 307.)

431-4 Human Factors Engineering of Visual Displays
Introduction to the design of visual display systems. Topics include radiometry and photometry, visual perception, linear systems analysis, color displays, colorimetry three-dimensional displays, standards, and guidelines. Prerequisite: HFE 306 or ISE 306; EE 321. (Previously listed as HFE 431.)

450-3 Human Factors Engineering Analysis Methods
Provides human factors engineering students access to a variety of engineering and behavioral analytic techniques critical to the study of work performance. Prerequisite: PSY 105, 110, STT 360. (Previously listed as HFE 450.)

451-4 Human Factors Engineering in Computer Systems Design
Theoretical paradigms in human-computer interaction and their application to interface design are examined. Emphasis is on advanced interface technologies, such as multimodal input/output, hypertext, and knowledge-based systems. Prerequisite: CEG 220, STT 361; HFE 450 or ISE 450. (Previously listed as HFE 451.)

456-2 Human Factors Engineering Laboratory
A stand alone laboratory course structured to expose students to equipment and procedures used in human factors engineering research and design. Prerequisite: HFE 307 or ISE 307. (Previously listed as HFE 456.)

465-4 Interactive Systems Modeling, Analysis, and Design
(Also listed as CEG 465.) Provide students experience in interactive real-time simulation, design, and implementation and evaluation of interfaces to simulations. The relevant topics are explored through application in supervisory control of complex, dynamic systems. Prerequisite: ISE 465, CEG 220 or any one of the following: CEG 221, 241, 242, or instructor permission. (Previously listed as HFE 465.)

471-4 Systems Performance Modeling
Study of quantitative techniques to analyze and predict systems performance. Topics include queuing models, system simulation, model validation, data collection, quantitative analysis of system performance, and system design evaluation. Prerequisite: HFE 450 or ISE 450; STT 361. (Previously listed as HFE 471.)

472-3 Design I
Segment one of the HFE senior design sequence. Practicum results in a conceptual design for the senior design project. The tutorial stresses human centered design principles. Prerequisite: HFE 471 or ISE 471. (Previously listed as HFE 472.)

473-3 Human Factors Engineering Design II
Segment two of the HFE senior design sequence. Practicum results in a preliminary engineering design for the senior design project. The tutorial stresses principles of systems analysis and engineering. Prerequisite: HFE 472 or ISE 472. (Previously listed as HFE 473.)

474-3 Human Factors Engineering Design III
Segment three of the HFE senior design sequence. Practicum results in the final engineering design and completion of the design project. The tutorial stresses application of HFE to systems design and industrial processes. Prerequisite: HFE 473 or ISE 473. (Previously listed as HFE 474.)

476-4 Human Factors Engineering in Aerospace System Design
Application of human factors engineering concepts to aerospace systems design. Develops human factors engineering influence on aerospace system dynamics, structure, and control as well as impact on reliability and maintainability. Prerequisite: HFE 471 or ISE 471. (Previously listed as HFE 476.)

480-4 Engineering in Occupational Safety and Health
Discusses and demonstrates the role and responsibility of engineers in occupational safety and health related issues. Focuses on the applications of human factors engineering design principles as a proactive approach for controlling occupational injuries. Prerequisite: HFE or ISE 306(506), 307(507), 450(650). (Previously listed as HFE 480.)

481-4 Engineering Economy
Introduction to analytical methods and techniques for optimizing the economic outcome of technical and managerial decisions. Includes time value of money, annual costs, present worth, future value, capitalized cost break-even analysis, and valuation and depreciation. Prerequisite: MTH 229. (Previously listed as HFE 481.)

482-3 Operations and Facilities Design
Provides a fundamental understanding of techniques for the layout and organization of operations in modern production and service facilities. Prerequisite: ME 408 or equivalent, HFE 471 or ISE 471 (corequisite) or equivalent or instructor permission. (Previously listed as HFE 482.)

499-1 to 5 Special Problems in ISE
Special topics in human factors engineering. Topics vary. (Previously listed as HFE 499.)
### Italian/ITA

**Note:** See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

**101-4 First-Year Italian**  
Study of the vocabulary and structure of the Italian language; practice in conversation, reading, and writing. ITA 101, 102, 103 must be taken in sequence.

**102-4 First-Year Italian**  
Study of the vocabulary and structure of the Italian language; practice in conversation, reading, and writing. ITA 101, 102, 103 must be taken in sequence.

**103-4 First-Year Italian**  
Study of the vocabulary and structure of the Italian language; practice in conversation, reading, and writing. ITA 101, 102, 103 must be taken in sequence.

**111-4 Essentials of Italian**  
Introduction to Italian with an emphasis on speaking the language.

**112-4 Essentials of Italian**  
Introduction to Italian with an emphasis on speaking the language. May be taken for a letter grade or pass unsatisfactory. Prerequisite: ITA 111 or permission of instructor.

**201-4 Second-Year Italian**  
Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. Prerequisite: ITA 103 or equivalent.

**202-4 Second-Year Italian**  
Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. Prerequisite: ITA 201 or equivalent.

### Japanese/JPN

**Note:** See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

**101-4 First-Year Japanese**  
Study of the vocabulary and structure of the Japanese language; practice in conversation, reading, and writing. 101, 102, 103 must be taken in sequence.

**102-4 First-Year Japanese**  
Study of the vocabulary and structure of the Japanese language; practice in conversation, reading, and writing. Prerequisite: 101.

**103-4 First-Year Japanese**  
Study of the vocabulary and structure of the Japanese language; practice in conversation, reading, and writing. Prerequisite: 102.

**111-4 Essentials of Japanese**  
Introduction to Japanese with emphasis on speaking the language.

**201-4 Second-Year Japanese**  
Continued study of the Japanese language with practice in speaking, reading, and writing. 201 and 202 must be taken in sequence.

**202-4 Second-Year Japanese**  
Continued study of the Japanese language with practice in speaking, reading, and writing. Prerequisite: 201.

### Latin/LAT

**Note:** See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

Students who have studied Latin elsewhere should consult the Department of Classics for the appropriate course level. Placement and proficiency tests can be given.

**101-4 Beginning Latin**  
Essentials of the Latin language.

**102-4 Beginning Latin**  
Essentials of the Latin language.

**103-4 Beginning Latin**  
Essentials of the Latin language.

**201-4 Intermediate Latin**  
Review of essentials and reading for comprehension in selected authors. Prerequisite: LAT 103 or equivalent.

**202-4 Intermediate Latin**  
Review of essentials and reading for comprehension in selected authors. Prerequisite: LAT 103 or equivalent.

The following courses offer a wide variety of authors and topics; they may be repeated for credit by number, although not by content. Students should consult the department for the scheduled subjects and authors. LAT 202 or equivalent is prerequisite for all 300- and 400-level language courses.

**351-4 Readings in Roman Drama**  
Plautus, Terence, and Seneca. Study of at least one play in Latin. Topics include importance of Plautus and Terence for the reconstruction of Greek New Comedy, architecture of the Roman theatre, history of Roman tragedy, and the relationship of Seneca’s tragedies to his Stoic philosophy.

**353-4 Readings in Roman Epic**  
Virgil’s Aeneid, Ovid’s Metamorphoses; Lucan, Statius, Valerius Flaccus, and Silius. Topics include intent and structure of the Aeneid, history and development of Roman epic, structure and transitional devices in the Metamorphoses, and the nature of rhetorical epic.
355-4 Readings in Roman Poetry
Roman lyric and elegiac poetry: Virgil’s Eclogues; Catullus, Horace, Propertius, Tibullus, and Ovid. Topics include meters and style of Latin lyric, amatory tradition, and the influence of Hellenistic poetry.

357-4 Readings in Roman Satire
Horace, Juvenal, Persius, Petronius, and Martial. Topics include development of this peculiar Roman genre, fragments of Lucilius, satirical methods and techniques, satiric epigram, and satire as a source of information about Roman private life.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of Latin. Topics vary.

451-4 Readings in Roman Didactic Literature
Study of Roman philosophical and didactic literature: Lucretius, Virgil’s Georgics, Cicero’s philosophical essays, and Quintilian. Topics include Roman attitudes toward Epicureanism, farming as a symbol of contemporary Roman politics, Cicero’s synthesis of Greek philosophy, Quintilian, and a gentleman’s education.

453-4 Readings in Roman History and Biography
Sallust, Livy, Tacitus, and Suetonius. Topics include Roman historiographical tradition, family and political influences, evidence from nonliterary sources, and influence from Greek historiography.

455-4 Readings in Roman Politics and Government
Cicero’s political essays and speeches; the letters of Cicero and Pliny. Topics include the nature of Roman political campaigns, selections from Roman constitutional law, information from inscriptions, and Augustus’ Res Gestae.

481-1 to 4 Independent Reading

Law/LAW

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

350-3 The Legal Environment of Business
Legal environment in which business functions. Introduction to law and legal systems, civil law, and white-collar crime. Public law topics include government regulation. Private law topics include torts and contracts.

360-3 Legal Aspects of Business Organizations

370-3 Legal Aspects of Commercial Transactions
Legal environment in which commercial transactions are conducted. Sale of goods, commercial paper, and financing the sale in secured transactions. Personal property and consumer protection. International sales transactions.

420-3 Legal Aspects of Managing a Diverse Workforce
Employment discrimination is examined in the broader context of workforce diversity. Major federal laws, court cases, and changing demographics impose obligations and present opportunities for employers and employees.

477-1 to 4 Special Studies in Business Law
Reading or research in selected area of business law.

480-1 to 4 Special Topics in Law
Topics vary.

Liberal Arts/LA

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-2 Introduction to Liberal Arts
Introduces liberal arts with an overview of program and career opportunities. Includes strategies for achieving academic success through time management, communication skills, note taking, test study, test taking, and enrichment opportunities.

199-1 to 2 Great Decisions
Faculty-led reading and discussion group centering on major foreign policy issues facing the United States. Topics vary.

201-2 Effective Career Planning
Assists students in developing academic major and career goals through identifying skills and interests and then researching appropriate options.

203-4 Sophomore Cooperative Education
Work experience in a liberal arts discipline. Faculty supervise and evaluate learning that requires planned and approved learning objectives, oral and/or written reports, employer evaluation, and conference with faculty supervisor. May be repeated three times. Prerequisite: part-time work experience.

205-4 Sophomore Cooperative Education
Work experience in a liberal arts discipline. Faculty supervise and evaluate learning that requires planned and approved learning objectives, oral and/or written reports, employer evaluation, and conference with faculty supervisor. May be repeated twice. Prerequisite: full-time work experience.
303-2 Junior Cooperative Education
Work experience in a liberal arts discipline. Faculty supervise and evaluate learning that requires planned and approved learning objectives, oral and/or written reports, employer evaluation, and conference with faculty supervisor. May be repeated three times. Prerequisite: part-time work experience.

305-4 Junior Cooperative Education
Work experience in a liberal arts discipline. Faculty supervise and evaluate learning that requires planned and approved learning objectives, oral and/or written reports, employer evaluation, and conference with faculty supervisor. May be repeated three times. Prerequisite: full-time work experience.

314-4 Research Methods in the Social Sciences
Develops skills in creating, manipulating, documenting, and analyzing data bases using SAS. Includes planning for and acquiring computer-compatible data and practical applications in social science disciplines. Prerequisite: CS 141 or MIS 100 or equivalent.

401-2 Implementing Career Decisions
Assists students in their career/job search. Through research, analysis, and structured exercises, the participants learn effective job-seeking skills. Final results for students should include discovering, exploring, and locating satisfying job situations.

403-2 Senior Cooperative Education
Work experience in a liberal arts discipline. Faculty supervise and evaluate learning that requires planned and approved learning objectives, oral and/or written reports, employer evaluation, and conference with faculty supervisor. May be repeated three times. Prerequisite: part-time work experience.

405-4 Senior Cooperative Education
Work experience in a liberal arts discipline. Faculty supervise and evaluate learning that requires planned and approved learning objectives, oral and/or written reports, employer evaluation, and conference with faculty supervisor. May be repeated twice. Prerequisite: full-time work experience.

490-1 to 6 Senior Project in Selected Studies
Intensive studies or work in a selected topic.

Linguistics/LI
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

371-4 Introduction to Historical and Comparative Linguistics
Principles of historical and comparative study of languages; introduction to Indo-European, Germanic, Romance, and Slavic philology.

399-1 to 4 Studies in Selected Subjects
Deals with problems, approaches, and topics in the field of linguistics. Topics vary.

Management/MGT
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

100-3 The World of Business and Administration
An introduction to the elements of the business environment and the major functions of business: management, marketing, manufacturing, human resources, finance, and accounting.

101-3 Community Leadership
Provides experiential skill development in the areas of leadership and community service. Students will complete a group community service project, which will be developed in conjunction with the Junior Leadership Dayton program. Open only to Junior Leadership Dayton students. Graded pass/fail/satisfactory.

200-3 Elements of Management and Supervision
For undergraduate, nonbusiness students to acquire a basic understanding of the history, practices, and roles of managers in work organizations.

280-3 Special Topics in Management
Provides students in disciplines outside the Raj Soin College of Business with an understanding of selected topics in management. Topics and prerequisites vary. All of the following courses require junior standing in addition to the listed prerequisites.

300-1 Business Integrity
Key ethics theories and professional development resources that constitute business integrity; domestic and international business cases analyzed with practical tools that strengthen individual moral awareness, judgment, character, and conduct and develop collective integrity-building skills.

301-3 Functions of Management
Essential functions and practices of management in organizations. Topics include planning, organizing, and controlling. Prerequisite: junior status.

302-3 Management and Organizational Behavior
Introduction to the functions and practices of management with emphasis on behavior within organizations. Topics include planning, controlling, leadership, motivation, and individual differences.

321-3 Human Resource Management
Analysis of the human resource system: interrelationship of policy areas such as staffing, development, and utilization. Prerequisite: MGT 302.
410-3 Organizational Development
Focuses on development as a systematic, continuing process designed to improve an organization’s ability to cope with change. Topics include anticipation of change, overcoming resistance, and intervention strategies. Writing intensive course. Prerequisite: MGT 321.

411-3 Leadership Studies
Focuses on advanced theoretical models and effective skills in developing managerial leadership in organizations; and leadership style assessments and structured programs for ongoing professional leadership development. Prerequisite: MGT 302.

412-3 Labor Relations
A comprehensive course that includes the following topics: the historical foundations of the American labor movement and contemporary industrial relations; the legal framework for industrial relations; and collective bargaining relationships—the players, structure, negotiations contract administration, and conflict management. Prerequisite: MGT 412.

422-3 Compensation Administration
A comprehensive analysis of the purpose, structure, and effectiveness of organizational compensation systems. Topics include: legal issues, job design, job analysis, job evaluation, direct pay systems, indirect pay systems, incentive pay systems, and compensation plan administration. Students develop a compensation plan for a simulated organization. Prerequisite: MGT 412.

424-1 Staffing the Organization
Introduction to the scientific, legal, and administrative issues associated with the selection, placement, and promotion of individuals by organizations. Topics include criterion development, test validation, job analysis, and recruitment. Prerequisite: MGT 321 and LAW 420.

473-3 Managing Conflict in Business
Conflict at work has positive and negative outcomes. Effectively managed, it strengthens relationships, while the converse destroys them. Basic theories provide foundation for practical applications of conflict resolution techniques in diverse work situations. Prerequisite: MGT 302.

474-3 Quality Business Practices
A domestic and global survey of best quality business practices and consulting processes. Examines team application of latest quality assessment and development tools to existing companies in order to accelerate transformation to quality organizations.

475-3 Small Business Management
Students will work in teams with small businesses to develop a business plan. They will look at marketing, finances, staffing, etc., needed to start a business or grow an existing business. This class provides excellent hands-on application of previous course work. Prerequisite: MGT 301, 302, MKT 301, 302, FIN 301.

477-1 to 3 Special Studies in Management
Reading or research in a selected field of management. Topics vary.

478-3 Honors: Independent Study in Management
Research in management for fulfillment of the Honors program project requirement.

480-1 to 4 Special Topics in Management
Seminar in special topics such as organizational assessment, training, and development, and personal career development. Topics vary.

481-3 to 6 Internship
A practical application that integrates academic learning with HRM or management work experiences. This linkage allows students to test their classroom learning in an organizational setting. Limited to HRM and management majors with senior status. Prerequisite: permission of instructor.

485-3 International Management
Studies fundamental concepts of international management and examines cultural, institutional, behavioral, and management systems and their operation in the international sphere. Prerequisite: MGT 302.

490-3 Managing Technology and Environment
Examines concepts of technology and innovation, relationships among business organizations, technological development, and the natural environment. Topics include technology transfer and procurement, mechanisms for environmental and technological assessment, and managing technological innovation.

491-3 Public Policy in the Business Environment
Relationship between business and government: the business environment and public policy, the corporate role in American society, and business social responsibility. Prerequisite: LAW 350.

492-3 Strategic Management and Organizational Policy
Integrative course requiring application of all functional areas of business in the analysis and solution of business problems. Strategic management is the core synthesizing concept of study. Students are required to work in teams inside and outside the classroom.
Management Information Systems/MIS

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions.

495-3 Strategies for Human Resource Management
Integrated human resource management strategies. Students will work in groups to analyze human resource structures, policies, and programs in field situations. Prerequisite: LAW 420; MGT 422,424. Open only to human resource management seniors who have completed a major of their major course work.

100-4 Introduction to Computer-based Information Systems
Computer literacy, information processing fundamentals, and terminology pertinent to using and developing computer applications. Students access database software and the Internet in the lab session. Three hour lecture, one hour lab.

210-3 Business Data Structures
Abstract data types, data structures, and their implementation in C/C++ programs. Data structures covered include stack, queues, lists, trees, and graphs. Course requirements include designing and testing C/C++ programs for business applications. Prerequisite: CS 209; MTH 228.

All of the following courses require junior standing in addition to the listed prerequisites.

300-4 Introduction to Management Information Systems
Examination of management information systems from a user perspective. Emphasis on the system life cycle, including computer system analysis and design and the software development life cycle. Data base support used to build an information system. Three hours lecture, two hours lab.

321-3 System Analysis Methodologies
Overview of the system analysis process. System analysis methodologies are presented through techniques that describe planning, process and data flow, data structure, and documentation techniques. Information gathering is explored. Prerequisite: MIS 300 or CS 208.

322-3 Systems Design and Implementation
Concentrates on strategies and techniques for design and implementation of an information system. Students learn to develop design and implementation specifications and test plans for information systems. Prerequisite: MIS 321.

323-3 Management of IS Projects
Examines the process of managing and developing information systems projects. Topics include project workload estimation, project planning, project management tools and strategies, change agentry, ethics, and ensuring IS quality. Prerequisite: MIS 321.

340-3 Web Applications Development
Hands-on class where the student will follow the steps of analysis, design, and implementation of Web applications. Various tools and databases will be used to create "dynamic" applications. Lecture and lab. Must have junior or senior level standing and be admitted to the Raj Soin College of Business for enrollment. Prerequisite: MIS 300 or MIS 322.

400-3 Business Operating Systems
Review of computer architecture and system administration. Topics include processor management, concurrent programming, memory management, file system, network management, and system maintenance. Emphasis is on the system administration in business organizations. Prerequisite: MIS 210.

410-3 Business Database Processing
An introduction to business information retrieval. Topics include DBMS, architecture, data modeling, SQL, data warehouse, data mining, and database reengineering. Exposure to most widely used commercial DBMSs such as Oracle, Informix, and DB2. Prerequisite: MIS 322.

420-3 Data Communications, Networks, and Distributed Processing
Familiarizes students with the background, concepts, proper application, and components of data communications, network design, and distributed information systems. Emphasis on the impact of communications technology on information systems. Prerequisite: MIS 300 or CS 208.

430-3 Decision Support Systems
Concentrates on the adaptive design process of building decision support systems (DDS) through integration of data and model bases for individual and organizational decision making. Emphasis is on requirements determination and evaluation phases. Prerequisite: MIS 321, MS 203.

440-3 E-commerce Management and Technology
Designed to familiarize individuals with current and emerging electronic commerce technologies using the Internet. Emphasis on intensive survey of technologies used to support all aspects of electronic commerce. Must have junior or senior standing and be admitted to the Raj Soin College of Business for enrollment. Prerequisite: MIS 410.

477-1 to 4 Special Studies in Management Information Systems
Research in selected fields of management information systems. Topics vary.
480-3 Special Topics in Management Information Systems
480-A AI/Expert Systems; 480-B Data Communications; 480-C Office Automation; 480-D Graphics; 480-E Distributed Processing; 480-F Management of IS; 480-G Database.

481-1 to 6 Internship in Management Information Systems
Faculty-supervised internship in management information systems. Students work on an information systems project in a firm or public agency and submit reports for completion of the course.

490-3 Information Systems Development Project
Provides students with experience in analyzing, designing, implementing, and evaluating information systems. Students work in teams to acquire practical experience with information systems development projects. Prerequisite: MIS 322.410.

Management Science/MS

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

201-3 Introduction to Data Analysis
Discusses statistical methods used in analysis of business problems, theory and application of frequency distributions, and measures of central tendency and variability. Introduction to probability, expectation, probability distributions, sampling, and estimation. Prerequisite: MTH 127.

202-3 Introduction to Statistical Inference
The study of additional statistical methods used in analysis of business problems. Statistical estimation, hypothesis testing with both single and multiple populations, the study of categorical data, analysis of variance, and regression techniques. Prerequisite: MS 201 and MTH 129 (or equivalent).

203-3 Applied Statistical Methods for Business
Use of statistical and analytical techniques to aid in problem solving. Decision theory, forecasting, queuing theory, simulation and linear programming techniques. Prerequisite: MS 202. MTH 228.

All of the following courses require junior standing in addition to the listed prerequisites.

306-3 Introduction to Operations Management
Discusses the major management approaches used in the production of goods and services. Major topics include total quality management, project and materials management, and independent and dependent demand inventory systems. Prerequisite: CS 205 and MS 203.

331-3 Forecasting and Inventory Management
Explores fundamentals of demand forecasting and applications to the management of wholesale and retail inventories. Topics include time series analysis of forecasting economic order quantities, reorder points, and factors affecting inventory decisions. Prerequisite: MS 203.

340-3 Global Operations Management
Success in international business depends on efficient and effective operations in managing the global supply chain. This course covers important issues relating to global supply chain management and coordinating production plans across the world. Prerequisite: MS 306.

345-3 Quality Management
Examines concepts, objectives, and applications of quality management in production systems. Topics include the teachings of quality management leaders, concepts, and tools for process control and ISO 9000 standards. Prerequisite: MS 306.

437-3 Production and Inventory Control
Advanced course in techniques for production and inventory management. Topics include production planning, material requirements planning, capacity planning, and production activity control. Prerequisite: MS 306.

438-3 Just-In-Time Production Systems
Explores fundamental principles involved in the design of just-in-time production systems. Topics include total quality control, workplace design, pull systems, cellular manufacturing, and supplier partnerships. Prerequisite: MS 306.

439-3 Purchasing Management
Emphasis is on the techniques used in the management of the purchasing process for evaluating and selecting suppliers, determining the quantities to order, and selecting the type of contract. Prerequisite: MS 306.

450-3 Systems Simulation in Business and Economics
Introduction to simulation techniques as applied to business and economic systems. Topics include basic concepts, applications, and technical problems associated with use of systems simulation. Design and operation of computer models emphasized. Prerequisite: MTH 228.

477-1 to 4 Special Studies in Management Science
Topics vary.

478-3 Honors: Independent Study in Management Science
Research in management science for fulfillment of the Honors program project requirement.
480-3 Special Topics in Management Science

481-1 to 6 Internship in Management Science
Faculty-supervised internship in management science. Students work in a firm or public agency, participate in seminars, and submit reports for completion of the course.

490-3 Senior Seminar in Management Science
Entails the investigation of an existing quantitative business problem in a firm or organization in the Dayton metropolitan area. The seminar participants, working in groups of three or four, are expected to initiate a research proposal, perform a field research investigation, and present findings orally and in writing to management. Prerequisite: MS 435.

Marketing/MKT

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

All of the following courses require junior standing in addition to the listed prerequisites.

280-1 to 3 Special Topics in Marketing
Provides students in various disciplines with an understanding of selected topics in marketing. For nonbusiness students interested in the selected topic. Topics and prerequisites vary.

301-3 Principles of Marketing
Explores the structure and functioning of the American marketing system and surveys the economic and social determinants; cost, productivity, and efficiency; product, price, promotion, and distribution exchange elements; and marketing research and planning.

302-3 Marketing Management
Emphasis on experiential learning of strategies and skills related to understanding internal and external influences and marketing functions within the framework of marketing planning. Prerequisite: MKT 301.

302-1 Marketing Management Lab
Develops business professionalism skills relevant to marketing management. Prerequisite: MKT 301.

303-3 Consumer Behavior
An understanding of the purchase decision processes of individuals and organizations. Examination of applicable theory, research findings, and concepts. Stresses conceptual models based on sources of influence. Prerequisite: MKT 302 with a grade of “C” or better.

356-3 Services Marketing
Explores the fundamental product, price, promotion, and distribution issues that require special attention in the marketing of services and their related developed and emerging theories for effective implementation. Prerequisite: MKT 302.

366-3 Personal Selling and Sales Management
Emphasizes personal selling-marketing relationships, buyer motivation and behavior, selling strategies, and techniques of selling. Objectives, policies, and techniques of sales force management including financial and performance responsibilities and opportunities. Prerequisite: MKT 302 with a grade of “C” or better.

416-3 Product Management
Intensive study of the product development and management process with emphasis on techniques, procedures, concepts, and theory applications. Prerequisite: MKT 301, 302.

418-3 Price Management
Evaluation and application of existing and developing pricing techniques, procedures, concepts, and theories to simulated and real price management problems. Prerequisite: nine hours economics, six hours accounting, and FIN 302. MKT 302 with a grade of “C” or better.

421-3 International Marketing
Analysis of the nature and scope of international marketing including its managerial and operational problems. Emphasis is on the role of environmental differences that influence marketing strategy. Prerequisite: MKT 302.

431-3 Physical Distribution
Overview of logistics as a part of the firm’s marketing program. Analysis of physical facilities, transportation, and alternative channels of distribution. Qualifies as distribution option for marketing majors. Prerequisite: MKT 302.

435-3 Starting New Ventures
Concepts and techniques of how to start your own business. Development of a business plan to encompass opportunity assessment; market analysis; financing; staffing; production; tax accounting; and legal, insurance, and marketing aspects. For nonbusiness majors only.

444-3 Telemarketing
Strategic applications of the telephone in all facets of marketing with specific reference to its role in industrial and consumer direct response marketing. Legal environment and ethics of marketing by phone explored in depth. Prerequisite: MKT 302.

446-3 Promotional Marketing
Emphasizes advertising responsibilities including message strategy, media selection, creativity, budgets, and evaluation; direct marketing skills, including database marketing, mailing lists, media, creativity, and testing; sales promotion campaign strategies; and promotional integration. Prerequisite: MKT 302 with a grade of “C” or better.
447-3 Internet Marketing
Covers the basic terminology, principles, concepts, and procedures related to marketing on the Internet. The student will understand how to use marketing strategies for effective and powerful Internet marketing. Prerequisite: MKT 302; MIS 300.

451-3 Marketing Research
Examination of the marketing research process in both a basic and an applied sense; focus on concepts and techniques currently employed in behavioral research. Prerequisite: MKT 301, 302, MS 201, 202.

461-3 Principles of Retailing
Analysis of the performance of marketing functions at the retail level. Emphasis on institutional and competitive factors and management of the marketing mix as it relates to retail market segments. Prerequisite: MKT 302.

471-3 Industrial Marketing
Marketing of goods and services to industrial/commercial enterprises, governments, and other nonprofit institutions. Legal, ethical, and international issues are included. Prerequisite: MKT 302, 336.

475-3 Entrepreneurship
How to start your own business. Concepts and techniques of planning to initiate or purchase a company. Students develop a written business plan for a new venture. Prerequisite: MKT 302, LAW 350, FIN 302.

477-1 to 6 Independent Studies in Marketing
Readings or research in a selected field of marketing.

478-3 Honors: Independent Study in Marketing
Research in marketing for fulfillment of the Honors program project requirement.

480-1 to 3 Special Topics in Marketing
Seminar in special topics such as consumerism and social issues, nonprofit organization marketing, advanced retailing management, channels of distribution, and forecasting. Topics vary.

481-1 to 6 Internship in Marketing
Faculty-supervised internship in retailing, marketing research, advertising, industrial selling, nonprofit sector marketing, or other areas of marketing. Requires monthly seminars and reports.

492-3 Marketing Planning
Final course to integrate the students' work in marketing and to promote marketing problem-solving capabilities. Involves group preparation and presentation of a marketing plan. Prerequisite: completion of majority of required marketing courses.

Mathematics/MTH
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

102-3 Elementary Algebra
Programmed beginning algebra. Sets, counting numbers, integers, rational numbers, equations in two variables, polynomials, factoring, fractions, and fractional and quadratic equations. At least level two on math placement test and departmental approval required.

126-5 Intermediate Algebra
For students with little or no recent experience with topics beyond elementary algebra. Topics include factoring, algebraic fractions, linear equations and word problems, equations involving fractions, laws of exponents, radicals and principal roots, quadratic equations, equations involving radicals or exponents, and line graphs. Topics covered are the same as in MTH 127, but involve more practice of necessary skills. Prerequisite: MTH 102 or equivalent or at least level three on math placement test.

127-3 Accelerated Intermediate Algebra
Best suited for students who have recent experience with intermediate algebra, but require a review. Topics covered are the same as in MTH 126, but the pace is much faster. Prerequisite: two units of high school algebra and at least level three on math placement test.

128-5 College Algebra
Best suited for students having little recent experience with topics beyond intermediate algebra or whose mastery of intermediate algebra is less than perfect. Topics covered are the same as in MTH 129 but are accompanied by more practice of necessary skills. In addition, skills learned in intermediate algebra are reinforced and clarified in the context of these more advanced topics. Prerequisite: MTH 126 or 127 or equivalent or at least level four on math placement test.

129-3 Accelerated College Algebra
Best suited for students who have previous experience with advanced algebra but require a review or who have excellent mastery of intermediate algebra. Topics include order, absolute value, linear and factored quadratic inequalities, equations and inequalities in two variables, simultaneous solutions, graphs of lines, circles, parabolas, and factored polynomials, functions, functional notation, exponential and logarithmic functions, and applications. Prerequisite: MTH 126 or 127 or equivalent or at least level four on math placement test.
130-5 PreCalculus
Functions and graphs, polynomial and rational functions, conics, systems of equations, exponential and logarithmic functions, geometric series, binomial theorem. Prerequisite: MTH 126 or 127 or equivalent or at least level four on math placement test.

131-3 Trigonometry
Trigonometric and inverse trigonometric functions. Not for credit to students with credit for MTH 134. Prerequisite: MTH 130 or equivalent or at least level five on math placement test.

134-5 College Algebra II and Trigonometry
Combines the material of MTH 130 and 131 into a single course. Topics covered are the same as in those two courses. Not for credit to students with credit for MTH 130 and/or MTH 131. Prerequisite: MTH 128, 129, or at least level five on math placement test.

143-4 Quantitative Reasoning
Discovery of fundamental concepts and skills of quantitative reasoning by exploring real-world data from many disciplines. Data collection, organization, display, analysis, probability simulation, variation and sampling, and expected values. Students work with appropriate software and graphing calculators. Prerequisites: MTH 126 or MTH 127 or at least level four on the placement test.

145-3 Mathematics and the Modern World
An application of mathematics to modeling real world problems from the behavioral, computational, managerial, and social sciences. Includes such topics as graph theory, linear programming, probability, descriptive and inferential statistics, voting systems, game theory, population growth, computer algorithms, and codes and data storage. Students work with appropriate software and graphing calculators. Prerequisites: MTH 126 or MTH 127 or equivalent or at least level four on the math placement test. Substitutions: MTH 143 or MTH 228 or MTH 229 and 230 or STT 264 and 265 or STT 160.

200-3 Accelerated Calculus I
This course and MTH 300 cover the material of MTH 229, 230, and 231 at an accelerated pace. Graded pass/unsatisfactory.

228-5 Calculus for the Management, Life, and Social Sciences
Functions, rates of change, limits, derivatives of algebraic functions, applications including maxima and minima, exponential and logarithmic functions, and indefinite and definite integrals with applications. Not for credit to students with credit for MTH 229 and 230. Prerequisite: MTH 128 or 129 or equivalent or at least level five on math placement test.

229-5 Calculus I
Conic sections, functions, limits, continuity, the derivative, derivatives of algebraic and trigonometric functions, and applications of the derivative. Prerequisite: MTH 131 or equivalent or at least level seven on math placement test.

230-5 Calculus II

231-5 Calculus III
Applications of the definite integral, polar coordinates, and parametric equations. Infinite series, power series, and vector algebra in the plane and space. Prerequisite: MTH 230.

232-5 Calculus IV
Partial derivatives and definite integrals in the plane and space. Vector functions and their derivatives, motion in space, vector fields, line and surface integrals, Green's theorem, divergence theorem, and Stoke's theorem. Prerequisite: MTH 231.

233-5 Differential Equations
Elementary first order equations, linear equations, linear systems, series solutions, Laplace transform, and applications. Uniqueness and existence theorems for solutions. Prerequisite: MTH 231.

243-4 Fundamental Mathematical Concepts I
Overview of mathematical topics from a perspective appropriate for early and middle childhood educators. Covers sets, functions, prealgebra and algebraic concepts, properties of whole numbers, integers, and rational numbers. Three hours lecture, one hour lab. Prerequisite: MTH 143.

244-4 Fundamental Mathematical Concepts II
Overview of mathematical topics from a perspective appropriate for early and middle childhood educators. Covers irrational numbers, proportions, introductory geometry, construction, congruence and similarity, and concepts of measurement. Three hours lecture, one hour lab. Prerequisite: MTH 243.

253-3 Elementary Matrix Algebra
Elementary course in matrix theory covering matrices, linear equations, determinants, linear transformations, eigenvalues, and eigenvectors. Prerequisite: MTH 230 or equivalent.

255-3 Linear Algebra
In-depth introduction to the basic concepts of linear algebra in real Euclidean n-space. Topics include Gaussian elimination, algebra of matrices, determinants, geometry of Euclidean space, subspaces, linear independence, basis, dimension and rank, and the Gram-Schmidt process. Prerequisite: MTH 231.
257-3 Discrete Mathematics for Computing
Discrete mathematics useful in computing.
Emphasis on mathematical induction, recurrence
relations, asymptotic behavior of functions, and
algorithm analysis. Prerequisite: MTH 230,
CS 142 or 241.

280-3 Introduction to Mathematical Proof
Basic notions of logic and techniques used in
mathematical proof: Students gain experience in
constructing proofs as they study basic notions
from sets, relations, functions, algebraic structures,
and the properties of real numbers. Prerequisite:
MTH 231.

290-3 Writing in Mathematics
Explores four aspects of writing in mathematics:
expository writing, explaining mathematical ideas;
formal writing, making proofs intelligible; writing
as a learning tool, clarifying ideas by putting them
on paper; and informal writing. Prerequisite: MTH
255 and 280.

300-3 Accelerated Calculus II
Continuation of MTH 200. Graded pass/
unsatisfactory. Prerequisite: MTH 200.

303-3 Differential Equations II
Examples of systems of differential equations,
complex and repeated eigenvalues, solutions of
systems, matrix exponential, qualitative behavior
of first order equations, planar systems and
stability, almost linear systems, and energy
method. Prerequisite: MTH 233, 253.

306-3 Mathematical Modeling
Structure and properties of mathematical models.
Size effects, dimensional analysis, graphical
methods, comparative statistics, stability,
opimization techniques, probabilistic models,
and Monte Carlo simulation. Prerequisite:
MTH 233, 253 or 355, or permission of instructor.

310-3 Issues in Science
(Also listed as BIO 310, CHM 310, GL 310, and
PHY 310.) A writing-intensive course dealing with
issues in science. Prerequisite: ENG 101, 102; a
first-year science course.

316-4 Numerical Methods for Digital Computers
Introduction to numerical methods used in
the sciences. Methods of interpolation, data
smoothing, functional approximation, integration,
solutions of systems of equations, and solutions
of ordinary differential equations. Three hours
lecture, two hours lab. Prerequisite: MTH 231,
MTH 253 or 255, and one of the following:
CS 142, 241; CEG 220; EGR 153.

317-4 Numerical Methods for Digital Computers
Introduction to numerical methods used in
the sciences. Methods of interpolation, data
smoothing, functional approximation, integration,
solutions of systems of equations, and solutions
of ordinary differential equations. Three hours
lecture, two hours lab. Prerequisite: MTH 233,
316, and MTH 253 or 355.

332-3 Complex Variables
Topics discussed include power series expansion,
the formula of Cauchy, residues, conformal
mappings, and elementary functions in the
complex domain. Prerequisite: MTH 232.

333-3 Partial Differential Equations and Boundary
Value Problems
Partial differential equations, boundary value
problems, and eigenfunctions. Fourier series,
applications. Prerequisite: MTH 232, 233.

343-4 Algebra and Functions for Middle
School Teachers
Polynomial, exponential, logarithmic, rational,
and trigonometric functions will be studied from a
perspective appropriate for a teacher. Computing,
programming, graphing, and data collection
technology will be used. Prerequisite: MTH 128.

344-4 Problem Solving for Middle School Teachers
A framework and useful heuristics for solving
problems. Visual thinking and reasoning,
metacognition, problem-solving logs and
summaries, problem solving individually and
in groups. Prerequisite: MTH 244, 343.

345-4 Geometry for Middle School Teachers
Axioms, finite geometries, nonmetric and metric
lengths, angles, area, volume, polygonal figures,
and elementary curves. Prerequisite: MTH 244.

348-4 Geometry for Middle School Teachers
An exploration and study designed to provide
a conceptual understanding of differentiation
and integration with examples of their diverse
applications and their connections to algebra
and geometry. Prerequisite: MTH 244, 343.

355-3 Advanced Linear Algebra
Covers vector spaces and subspaces, basis and
dimension, linear transformations and matrices,
eigenvalues and eigenvectors, and inner product
spaces. Prerequisite: MTH 255.

381-3 Elementary Number Theory
Divisibility properties of integers, prime numbers,
congruences, the Chinese remainder theorem,
quadratic reciprocity law, Mobius inversion
formula, Euler φ-function, other number-
theoretic functions. Prerequisite: MTH 231
or junior standing.

399-1 to 5 Selected Topics
Selected topics in mathematics. May be taken
for letter grade or pass/unsatisfactory.

407-3 Optimization Techniques
(Also listed as CS 407.) Concepts of minima and
maxima. Linear programming: simplex method,
sensitivity, and quality. Transportation and
assignment problems. Dynamic programming.
Prerequisite: MTH 233, 253 or 255.
410-4 Theoretical Foundations of Computing
(Also listed as CS 410.) Turing machines, $\mu$-recursive functions, equivalence of computing paradigms, Church-Turing thesis, undecidability, and intractability. Prerequisite: CS 466.

416-4 Matrix Computations
(Also listed as CEG 416.) Survey of numerical methods in linear algebra, emphasizing practice with high-level computer tools. Topics include Gaussian elimination, LU decomposition, numerical eigenvalue problems, QR factorization, least squares, singular value decompositions, and iterative methods. Prerequisite: MTH 253 or 255; and CS 142 or 241.

419-3 Cryptography and Data Security
(Also listed as CS 419.) Introduction to the mathematical principles of data security. Various developments in cryptography will be discussed, including public-key encryption, digital signatures, the data encryption standard (DES), and key safeguarding schemes. Prerequisite: MTH 253 or 255.

431-3 Real Variables I
Functions, sequences, limits, continuity, differentiability, integration, and mean-value theorems. Prerequisite: MTH 280.

432-3 Real Variables II
Infinite series, uniform convergence, Taylor series, improper integrals, special functions, and Fourier series. Prerequisite: MTH 431.

433-3 Real Variables III
Theory of functions of several variables, vector-valued functions. Prerequisite: MTH 432.

434-5 Introduction to Complex Analysis I
Complex arithmetic, differentiation, analytic functions, the Cauchy-Riemann equations, elementary functions and their mapping properties, integration (Cauchy's theorem, Cauchy integral formula), Taylor and Laurent series, poles, residues, and the residue theorem. Prerequisite: MTH 232.

440-3 History of Mathematics
Development of calculus from antiquity through Newton, Leibnitz, development of classical analysis; the rise of abstraction; set theory, algebra, and topology; modern analysis. Prerequisite: MTH 231, 451, 471.

446-4 Mathematical Modeling for Middle School Teachers
An introduction to mathematical modeling by modeling real world problems individually and in groups. Focuses on working with the steps involved in modeling a real-life situation and understanding how modeling differs from simple problem solving. Prerequisite: MTH 344.

450-3 Discrete Algebraic Structures
Introduction to several abstract algebraic structures and their models that are used in computer science. Examples include semigroups and finite-state machines, and groups and codes. Prerequisite: MTH 253 or 255 or equivalent.

451-3 Introduction to Modern Algebra I
Introduction to abstract algebraic structures including groups, rings, integral domains, and fields. Prerequisite: MTH 280 or 450.

452-3 Introduction to Modern Algebra II
Introduction to abstract algebraic structures including groups, rings, integral domains, and fields. Prerequisite: MTH 451.

456-3 Coding Theory
(Also listed as CEG 478, EE 478.) Examines the essentials of error-correcting codes and the study of methods for efficient and accurate transfer of information. Topics to be covered include basic concepts, perfect and related codes, cyclic codes, and BCH codes. Prerequisite: MTH 253 or MTH 355 (or equivalent).

457-3 Combinatorics
Topics are permutations, combinatorics, generating functions, recurrence relations, and Polya's theory of counting. Prerequisite: MTH 231.

458-3 Applied Graph Theory
(Also listed as CS 458.) Introduction to methods, results, and algorithms of graph theory. Emphasis on graphs as mathematical models applicable to organizational and industrial situations. Prerequisite: MTH 231, and CS 142 or 241.

459-3 Combinatorial Tools for Computer Science
(Also listed as CS 459.) Introduction to some of the mathematical tools needed for an understanding of computer programming. The topics covered are summations, elementary number theory, combinatorial identities, generating functions, and asymptotics. Credit for MTH 457 recommended. Prerequisite: MTH 280.

471-3 Geometry
Topics in foundations of Euclidean geometry, introduction to non-Euclidean and other geometries. Prerequisite: MTH 280.

472-3 Projective Geometry
Projective and affine planes and spaces, change of coordinates, projective transformations, and conics. Prerequisite: MTH 231.

475-4 Differential Geometry
Calculus on Euclidean space frame fields, calculus on a surface, shape operators, and geometry of surfaces in Euclidean three space. Prerequisite: MTH 232.
476-1 Computer Graphics I
(Also listed as CEG 476.) Contents: raster graphics algorithms, geometric primitives and their attributes, clipping, anti-aliasing, geometric transformations, structures and hierarchical modes, input devices, and interactive techniques. Students develop interrelated programs to design, manipulate, and view a three-dimensional hierarchical model. Prerequisite: MTH 253 or 255, CS 400.

477-1 Computer Graphics II
(Also listed as CEG 477.) Continuation of MTH 476. Covers surface rendering, hidden line and surface removal, illumination models, texture mapping, color models, geometric modeling, and graphical interface design. Students develop programs and a final project. Prerequisite: MTH 476.

480-3 Methods of Applied Mathematics: Geometric Methods
Basic mathematical tools for the description of physical systems in three-dimensional space: vector and tensor analysis, matrices, and curvilinear coordinate systems. Prerequisite: MTH 232, 253 or 255.

481-3 Methods of Applied Mathematics: Differential Equations
Solution methods for ordinary differential equations commonly arising in physics and engineering. Systems of equations, linear spaces, eigenvalue problems, Sturm-Liouville theory, and orthogonal functions. Additional topics selected from Bessel and Legendre functions, stability theory, Liapunov's methods, autonomous systems and the Poincare phase plane, and existence and uniqueness theorems. Prerequisite: MTH 233, MTH 355 or 480.

482-3 Methods of Applied Mathematics: Integral Methods
Use of integral transforms in the solution of differential and integral equations. Fourier series, Fourier and Laplace transforms and inverses, integral equations, and Green's functions. Prerequisite: MTH 332 or 434; MTH 355 or 480.

488-1 to 5 Independent Reading
Topics vary.

491-3 Undergraduate Mathematics Education Seminar
Detailed study of the connections within mathematics and between mathematics and school mathematics. May be taken for letter grade or pass/unsatisfactory. Prerequisite: MTH 432, or Senior standing and permission of instructor.

492-3 Undergraduate Mathematics Seminar
Detailed study of a single mathematics topic chosen by the student with the approval of the instructor. The student will present the results of the study in an expository paper submitted to the instructor, and also present them to a broader audience. Prerequisite: MTH 432 or 452 or senior standing and permission of instructor. Limited to mathematics majors except those in the statistics option. May be taken for a letter grade or pass/unsatisfactory.

499-1 to 5 Selected Topics
Selected topics in mathematics.

Mechanical and Materials Engineering/ME

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

199-3 Introduction to Engineering Design
Introduction to the principles and practice of mechanical and materials engineering design. Fundamental design philosophy using a hands-on approach, including topics such as safety, ethics, and product liability. Teamwork and communicated skills are stressed.

201-2 Computer-Aided Drafting
Basic techniques of computer-aided engineering drawing. Graphic primitives, drawing, editing, dimensioning, multiple views, hatching, drawing intelligence, and three-dimensional modeling. One hour lecture, two hours lab. Prerequisite: completion of fundamental course in engineering drawing.

202-4 Engineering Graphics
Basic concepts of engineering drawing with applications to manual and computer-aided drafting: multiview projections: sectional, auxiliary, and pictorial views: dimensioning: and intersections and developments.

212-4 Statics
Forces, resultants, components, equilibrium of particles, equilibrium of rigid bodies, centroids and centers of gravity, analysis of structures, friction, and moments of inertia. Prerequisite: MTH 231 and PHY 240.

213-4 Dynamics
Vector treatment of the kinematics and kinetics of particles and rigid bodies, based on Newton's laws and including work-energy and impulse-momentum techniques. Prerequisite: ME 212, PHY 240.

220-3 Introduction to Manufacturing Processes
Fundamentals of manufacturing processes, materials, measurement and quality assurance, casting processes, forming processes, material removal processes, joining processes, and other processes and techniques related to manufacturing.
313-5 Strength of Materials
Discuss stress axials and shear stresses and strain, bi-
axial loads, torsion of circular shafts, shear and
bending moment diagrams, deflection of beams,
and column theory. Four hours lecture, two hours
lab. Prerequisite: MTH 253, EGR 153.

315-4 Thermodynamics I
Classical thermodynamics with applications of
the first and second laws to engineering systems.
Prerequisite: PHY 244. Co-requisite: MTH 232.

316-4 Thermodynamics II
Concepts of availability and irreversibility, power
and refrigeration cycles, thermodynamic relations,
and mixtures and combustion. Three hours lecture,
two hours lab. Prerequisite: ME 315.

317-4 Fluid Dynamics
Study of fluid properties; fluid statics, one-
dimensional compressible and incompressible
flows; and flow of real fluids, flow measurement.
Three hours lecture, two hours lab. Prerequisite:
ME 213, 315.

318-4 Heat Transfer
Principles that govern heat transfer in solids,
fluids, vacuum, and at interfaces of solids and
fluids. Laboratory experiments to illustrate these
phenomena. Three hours lecture, two hours lab.
Prerequisite: ME 317.

370-4 Materials Engineering Science
Effect of atomic, molecular, and crystalline
structure on the properties of materials with
emphasis on electronic materials and ceramics;
characterization of materials; and device
fabrication. Prerequisite: CHM 122, PHY 244.

371-3 Structure and Properties of
Engineering Materials
Effect of microstructure, phase equilibrium, and
processing on properties of structural materials
including metallic alloys, polymers, and
composites. Prerequisite: ME 313, 370.

375-4 Thermodynamics of Materials
Application of classical thermodynamics to
engineering materials. Heats of formation and
reaction; behavior of solutions; free energy
concepts; thermodynamic fundamentals of
phase equilibria. Prerequisite: ME 315.
Corequisite: ME 371.

376-3 Physical Metallurgy
Fundamentals of structure property relations in
metals and alloys related to transformations
and kinetics. Application to recovery and
recrystallization, solidification, precipitation
strengthening, and displaceable transformations.
Prerequisite: ME 375.

385-2 Metallography Laboratory
Preparation of metallographic specimens; use
of the metallurgical microscope including the
preparation of photomicrographs. Corequisite:
ME 370.

386-2 Materials Testing Laboratory
Fundamentals of mechanical testing
instrumentation and techniques including the
tensile test, hardness test, effect of heat-treatment
on strength, and correlation of microstructure,
composition, and properties. Prerequisite:

405-4 Kinematics and Design of Mechanisms
Graphic, analytical, numerical, and symbolic
techniques are used in the kinematic and dynamic
analysis of machines. Computer-aided design of
mechanisms is introduced. Emphasis on the
application of these techniques to planar
mechanisms. Prerequisite: ME 213.

408-3 Design Optimization
Concepts of minima and maxima; linear, dynamic,
integer, and nonlinear programming; variational
methods. Engineering applications are
emphasized. Prerequisite: ME 213, MTH 253.

409-4 Aerospace Structures
Stress, deformation, and stability analysis of
aerospace structures. Thin-walled members
bending, torsion, and shear stresses calculation
in multicell structures. Buckling of thin plates.
Prerequisite: ME 313.

412-4 Finite Element Analysis
Finite element formulations for line, surface,
bending, torsion, and three dimensional elements.
Numerical methods and application of FEM
programs in structural design and solid mechanics.
Prerequisite: ME 313, MTH 233.

414-4 Mechanical Design I
Fundamental concepts in design for static
strength, fatigue, and impact loading; application
to selected mechanical components and systems.
Prerequisite: ME 313.

415-4 Mechanical Design II
Design of mechanical elements such as springs,
bearings, shafts, gears, clutches, brakes, and
flywheels. Students conduct an individual
design project. Prerequisite: ME 414.

417-3 Mechanics of Viscous Fluids
Fundamental equations of viscous flow for laminar
and turbulent flows. Boundary layer analysis.
Analytical and numerical solutions of the
equation of motion. Prerequisite: ME 317.

418-3 Heat Conduction in Solids
Analytical and numerical techniques for heat
conduction problems in one, two, and three
dimensions for steady and transient cases. Phase-
change problems. Prerequisite: ME 318.

423-4 Energy Conversion
Important new developments in energy
conversion. Thermolectric, photoelectric,
thermionic, and electromechanical systems are
studied. Prerequisite: ME 315.
292 Course Descriptions

430-4 Aeronautics
Aviation history, Standard atmosphere, basic aerodynamics, theory of lift, airplane performance, principles of stability and control, and astronautics and propulsion concepts. Prerequisite: ME 213, 315.

431-4 Aerospace Propulsion
Engine cycle analysis; combustion fundamentals; reciprocating engines, propellers; applications to turbojet, turbofan, turboprop, ramjet, SCRAM jet, and rocket engines. Prerequisite: ME 317.

432-4 Flight Dynamics and Control Systems

434-4 Computational Fluid Dynamics
Introduction to CFD methods; governing equations, PDEs, finite difference numerical methods, stability analysis, incompressible and compressible flows, subsonic to supersonic flows. Prerequisite: ME 317.

442-3 Vehicle Engineering
Develops students’ abilities to derive and solve vehicle equations and introduces how dynamic analysis is used in vehicle design. Various performance criteria, control concepts, and HEVs will be studied. Prerequisite: ME 213.

444-4 Principles of Internal Combustion Engines
Thermodynamics of I.C. engines, combustion thermodynamics, friction, heat and mass losses, and computer control of the modern fuel-injected I.C. engine. Prerequisite: MTH 232, ME 316, 317.

456-4 Introduction to Robotics
(Also listed as CEG 456, EE 456.) Introduction to the mathematics, programming, and control of robots. Topics include coordinate systems and transformations, manipulator kinematics and inverse kinematics, trajectory planning, Jacobians and control. Prerequisite: senior standing and MTH 253; proficiency in Pascal, C, or FORTRAN programming.

458-4 Instrumentation and Measurement
Develops understanding in measurements, conveys the principles and practice for design of systems including uncertainty and signal reconstruction, and establishes the physical principles and techniques used to measure those quantities most important for applications. Prerequisite: EE 301 or equivalent.

458-0 Instrumentation and Measurement Lab
Develops understanding in measurements, conveys the principles and practice for design of systems including uncertainty and signal reconstruction, and establishes the physical principles and techniques used to measure those quantities most important for applications. Prerequisite: EE 301 or equivalent.

460-4 Mechanical Vibrations
Modeling and analysis of single and multi-degree of freedom systems under free and forced vibration and impact, Lagrangian and matrix formulations, energy methods, and introduction to random vibrations. Prerequisite: ME 213, EE 321.

464-4 Mechanical System Modeling and Design
Teaches students how to model complex mechanical systems as a set of simple, linear, or nonlinear components for the purpose of design. Students will be introduced to modern computational tools. Prerequisite: ME 213.

470-3 Failure Analysis
Engineering aspects of failure analysis, failure mechanisms and related environmental factors, and analysis of actual service failure. Prerequisite: ME 313, 371.

472-4 Structure and Properties of Engineering Polymers
Introduces polymers as engineering materials and covers fundamental concepts in polymer science and engineering. Includes polymerization processes, morphology and crystallinity, thermal transitions, viscoelasticity, rubber elasticity, aging, and contemporary issues in polymers. Prerequisite: ME 370.

475-3 High Temperature Materials
The design and use of high temperature superalloys, strengthening mechanisms, creep and fatigue, corrosion and oxidation, protective coatings, and alternative materials. Prerequisite: ME 376. Corequisite: ME 477.

477-4 Mechanical Behavior of Materials
Crystal plasticity and single crystal behavior. Introduction to dislocation theory. Strengthening mechanisms and polycrystalline behavior. Introduction to viscoelasticity. Fracture, fatigue, and creep of materials. Prerequisite: ME 313, 371.

478-3 X-Ray Spectral Analysis
(Also listed as GL 474.) Electron microprobe and X-ray fluorescence for analysis of alloys and other materials explained and demonstrated on examples. Two hours lecture, one hour lab. Prerequisite: ME 482.

479-4 Materials Corrosion
(Also listed as CHM 479.) Survey of principles of corrosion processes with application to metallic and nonmetallic materials. Principles of electrochemistry are included. Prerequisite: ME 315, 371. Corequisite: CHM 453.

480-4 X-Ray Methods in Materials Science
Introduction to the theory and practice of diffraction methods in the study of alloys, refractory materials, and polymers. Two hours lecture, four hours lab. Prerequisite: ME 376. (Previously listed as ME 482.)
481-4 Materials Characterization
Principles of characterization of materials based on particle and wave taxonomies integrated with sensor methods and principles. Prerequisites: ME 371.

482-4 Intro to Transmission Electron Microscopy
Principles that govern image formation and electron diffraction of crystalline materials, laboratory demonstrations and experiments to illustrate the principles. Three hours lecture, one hour lab. Prerequisites: ME 371.

483-3 Introduction to Ceramics
Ceramic and refractory raw materials and products; atomic structure and bonding; structure of crystalline phases and glasses; structural imperfections; diffusion in oxides; phase equilibria; and processing of ceramics. Prerequisite: ME 375.

484-4 Physical Ceramics
Processing, microstructure, and properties of ceramics; defect equilibria in oxides; thermal, optical, electrical, and mechanical properties of ceramic materials; ceramics for special applications. Three hours lecture, two hours lab. Prerequisite: ME 483.

485-4 Solidification Processing
Fundamentals of melt solidification, application to metals casting technology, and an introduction to powder metallurgy. Three hours lecture, two hours lab. Prerequisite: ME 375.

486-4 Deformation Processing
Fundamentals of principal deformation processing systems including forging, extrusion, rolling, and sheet forming; material response and formability; and mechanics and analysis of selected processes. Three hours lecture, two hours lab. Prerequisite: ME 313, 371.

487-4 Machining
Fundamentals of machining with an emphasis on engineering models of machinability; chip formation, cutting forces and power, and lubrication. Introduction to numerical control machining. Three hours lecture, two hours lab. Prerequisite: ME 371.

488-4 Powder Processing

489-4 Engineering Plastics: Materials, Processes, and Design
(Also listed as CHM 469.) Properties and manufacturing processes of engineering plastics and effect of these factors on plastics design. Illustrative laboratory projects included. Two hours lecture, four hours lab. Prerequisite: CHM 465.

490-1 Engineering Design I
Independent investigation of contemporary engineering problems under the guidance of an instructor. Topics selected to meet the needs and interests of students. Research of professional literature and submission of an engineering report required. Two hours lecture, two hours lab, one hour recitation. Prerequisite: ME 316, 317, 371, 408, and 414.

491-1 Engineering Design II
Independent investigation of contemporary engineering problems under the guidance of an instructor. Topics selected to meet the needs and interests of students. Research of professional literature and submission of an engineering report required. Two hours lecture, two hours lab, one hour recitation. Prerequisite: ME 490.

492-1 Materials Engineering Design
Independent investigation of a contemporary problem in materials science and engineering under faculty guidance. Project design and reporting are emphasized along with analysis, synthesis, and testing. Prerequisite: ME 376 and 385.

493-3 Materials Engineering Design II
Independent investigation of a contemporary problem in materials science and engineering under faculty guidance. Project design and reporting are emphasized along with analysis, synthesis, and testing. Prerequisite: ME 492.

494-1 to 5 Special Problems in Mechanical and Materials Engineering
Special problems in advanced engineering topics. Topics vary.

Medical Technology/MT
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

Enrollment in the following courses is limited to medical technology interns.

424-3 Introduction to Clinical Laboratory Science
Introduction to procedures and techniques related to clinical laboratory function.

435-2 Advanced Clinical Laboratory Science
Study of advanced methodology and instrumentation that may include computer applications, data management, research data collection, and statistical analysis.

436-5 Diagnostic Microbiology
Application of microbiological principles to diagnosis, infection, and resistance.

437-5 Methods of Diagnostic Microbiology
Laboratory experiments in diagnostic microbiology. Corequisite: MT 436.

438-5 Clinical Chemistry
Application of principles of biochemistry to the human in health and disease.
456-3 Advanced Diagnostic Microbiology
Studies of species of fungi, mycobacteria, anaerobic bacteria, mycoplasmas, spirochetes, chlamydiae, rickettsiae, and viruses that are pathogenic for humans. Covers organisms' characteristics, clinical disease manifestations, habitat and transmission, mechanisms of pathogenesis, treatment, and disease prevention. Prerequisite: MT 436.

458-3 Advanced Clinical Chemistry
Studies basic physiology, analytical procedures, and clinical correlations of disease syndromes and pathogenic conditions associated with the endocrine gland, hormonal disorders, gastrointestinal dysfunction, inborn errors of metabolism, and/or mineral deficiencies. Prerequisites: MT 438.

Microbiology and Immunology/M&l

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

220-5 Microbiology of the Human Environment
Biology of viruses, bacteria, fungi, protozoans, and helminths as related to their natural environments and host-parasite interaction. Introductory course for students in environmental health, nursing, and patient-oriented paramedical health professions. Four hours lecture, two hours lab. Prerequisite: BIO 105 or equivalent, CHM 101 or 102.

426-3 Immunology and Basic Virology
Study of the fundamentals of immunobiology and basic virology; emphasis on the regulatory and cellular level of host immune response against microbial pathogens as well as mechanisms of immunopathology, and on the characteristics and molecular biology of viral pathogens. Prerequisite: BIO 252, CHM 216, or departmental approval.

427-3 Pathogenic Microbiology
Study of microorganisms pathogenic for humans and animals using the organ system approach with emphasis on mechanisms of pathogenesis and host resistance. Prerequisite: M&I 426, BIO 252 or 402, CHM 216, or departmental approval.

428-3 Principles of Laboratory Medical Microbiology and Immunology
Identification of etiological agents of disease. Emphasis on identification of bacteria, fungi, and viruses using cultural and immunological methods. Prerequisite: BIO 252, 402; CHM 216; or departmental approval. Corequisite: M&I 426.

431-3 Basic Virology
Introduction to the field of virology; plant, animal, and bacterial viruses. Emphasis on the intrinsic properties of viruses and their interaction with cells, multiplication, genetics, and tumor induction. Prerequisite: BMB 421, BIO 402, or permission of instructor.
437-6 Recombinant DNA Methods Laboratory
Microbial and molecular techniques for producing, cloning and characterizing recombinant DNA molecules; laboratory exercises in gene manipulation to give an understanding of the principles of genetic engineering. Prerequisite: BIO 210, 211, 410 or permission of instructor.

445-5 Immunobiology
Study of biology of the immune system in terms of current concepts of antibody formation and function. Acquired, delayed, and immediate hypersensitivities are studied with respect to immunological deficiencies, malignancy, tolerance, graft rejection, infection, and acquired resistance. Four hours lecture, one hour recitation. Prerequisite: M&I 426, BIO 402, or permission of instructor.

462-3 Immunology
Study of the immune system with emphasis on basic molecular and cellular mechanisms and applications to human disease. Prerequisite: BIO 112, 114, 115, or permission of instructor.

488-1 to 4 Independent Reading
499-1 to 4 Special Problems in Microbiology

Military Science/MIL

Note: See quarterly class schedule or departmental requirements, or special course information.

111-1 Introduction to Military Science I
Introduction to customs, courtesies, doctrine, and organization of the U.S. Army, and policies affecting deployment of land forces.

112-1 Introduction to Military Science III
Introduction to leadership emphasizing fundamentals and principles of leadership, characteristics of a group, and traits of a leader.

113-1 Introduction to Military Science III
Analysis of leadership theories and management tasks including analysis of organizational structures, planning and organizing, and controlling rewards and punishments. Extensive use of case studies in leadership and management.

211-2 Introduction to Military Leadership I
Analysis of the light infantry squad's weapons and employment and the leader's role in directing and controlling small units in the execution of offensive and defensive tactical missions. Two hours lecture, one hour lab.

212-2 Introduction to Military Leadership II
Hands-on approach to the fundamentals of military map reading. Emphasis on identification of terrain features, using grid systems, plotting locations, measuring distances, intersection, resection, and graphic representation.

213-2 Introduction to Military Leadership III
Instruction and practical experience in the treatment of casualties including CPR. Analysis of the leader's role in establishing preventive medicine and physical readiness programs. Two hours lecture and physical education, one hour lab.

311-2 Small Unit Leadership I
Analysis of the small unit leader's role in the execution of tactical missions. Requires weekend training exercises and participation in a physical fitness program. Two hours conference, one hour lab. Prerequisite: MIL 111, 112, 113, 211, 212, 213 or equivalent.

312-2 Small Unit Leadership II
Study of military weapons and equipment and analysis of geography as it pertains to military operations. Requires participation in weekend exercises and physical training program. Two hours conference, one hour lab. Prerequisite: MIL 311.

313-2 Small Unit Leadership III
Development of ability to express oneself clearly and accurately with emphasis on analysis of military problems, evaluation of situations, and preparation and delivery of logical solutions. Requires participation in weekend training exercises and physical training program. Two hours conference, one hour lab. Prerequisite: MIL 312 or departmental approval.

411-2 Advanced Leadership I
Study of the organization and functions of military staffs with an in-depth analysis of the coordinating staff. Introduction into officer-enlisted relations. Requires participation in weekend training exercises and a physical fitness program. Two hours conference, one hour lab. Prerequisite: MIL 311, 312, 313; or permission of instructor.

412-2 Advanced Leadership II
Study of military correspondence and briefing techniques/formats. Introduction to professionalism and military professional ethics. Requires participation in weekend training exercises and a physical fitness program. Two hours conference, one hour lab. Prerequisite: MIL 411 or permission of instructor.

413-2 Advanced Leadership III
Study/analysis of selected leadership and management problems within the military justice system. Introduction to the counseling obligations and responsibilities of an officer. Requires participation in weekend training exercises and a physical fitness program. Two hours conference, one hour lab. Prerequisite: MIL 411, 412, or permission of instructor.

450-1 Advanced Topics
Independent study project on selected recent or current events that impact on U.S. Army operations, doctrine, structure, planning, or organization. A detailed presentation, causes, actions, and results of a selected topic. Prerequisite: MIL 411, 412, and 413.
Modern Language Humanities/ML

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

301-4 French Culture
Study of French culture according to language distinctions with emphasis on the uniqueness within the family of nations.

302-4 Germanic Culture
Study of German culture according to language distinctions with emphasis on the uniqueness within the family of nations.

303-4 Spanish Culture
Study of Spanish cultures according to language distinctions with emphasis on the uniqueness within the family of nations.

304-4 Spanish-American Culture
Study of Spanish-American culture according to language distinctions with emphasis on the uniqueness within the family of nations.

305-4 Russian Culture
Study of Russian culture according to language distinctions with emphasis on the uniqueness within the family of nations.

306-4 Brazilian Culture
Brazilian film, music, and literature are studied in their historical context, reflecting Brazilian society and politics.

311-4 Literature in Translation
Selected works of foreign literature studied in English translation. French literature.

312-4 Literature in Translation
Selected works of foreign literature studied in English translation. German literature.

313-4 Literature in Translation
Selected works of foreign literature studied in English translation. Russian literature.

314-4 Literature in Translation
Selected works of foreign literature studied in English translation. Spanish literature.

315-4 Literature in Translation
Selected works of foreign literature studied in English translation. Spanish-American literature.

316-4 Literature in Translation
Selected works of foreign literature studied in English translation. Scandinavian literature.

369-3 Children's Literature for Teachers of Foreign Languages
Reading and discussion of children's books in modern languages (French, Spanish, German, and Russian) and reading informational books about the countries where the languages are spoken. Prerequisite: SPN 202 or FR 202 or RUS 202 or GER 202.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of modern languages. Topics vary.

Motion Pictures/MP

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

131-4 Film Appreciation
Introduction to film appreciation and analysis; examines critical approaches to film and film style including authorship and genre.

180-3 Film Production I
Introduction to the basic elements of film production including scripting, cinematography, editing, and sound. Participation on super-8 film projects from initial conception to final screening.

231-3 History of the Motion Picture I
Historical development of the art of the film from 19th-century scientific experiments through the end of silent era. Examination of technical, social, economic, and cultural factors that have shaped film art.

232-3 History of the Motion Picture II
Historical development of the art of the film from beginning of the sound era to the mid-fifties. Consideration of both American and European film and relation of films to sociocultural conditions.

233-3 History of the Motion Picture III
Historical development of the art of the film from the beginning of the mid-fifties to the present. The decline of the studio system, major film movements of the sixties, and the rise of independent feature production are considered.

253-3 Basic Video Production
(Also listed as COM 253.) Introduction to the use of video production equipment, using lecture, demonstration, and experiential approaches. Appropriate laboratory time provided in television studio. Prerequisite: COM 152, or permission of instructor.

281-3 Intermediate Film Production
Production of medium length film projects under faculty supervision. Review of lip-sync film production techniques and discussion of special production problems. Includes writing of film treatment and shooting script, and shooting and finishing a medium-length film. Prerequisite: MP 180.

282-3 Intermediate Film Production
Production of medium length film projects under faculty supervision. Review of lip-sync film production techniques and discussion of special production problems. Includes writing of film treatment and shooting script, and shooting and finishing a medium-length film. Prerequisite: MP 281.
283-3 Intermediate Film Production
Production of medium length film projects under faculty supervision. Review of lip-sync film production techniques and discussion of special production problems. Includes writing of film treatment and shooting script, and shooting and finishing a medium-length film. Prerequisite: MP 282.

331-3 Studies in Film History
Provides intensive study of selected areas of film history. Titles vary. (Previously listed as TH 331.)

332-3 Studies in Film Authorship
Provides an intensive study of the work of one or more film directors or other creative personnel, such as screenwriters or performers. Titles vary. Prerequisite: MP 131 or permission of instructor.

333-3 Studies in Film Genre
Provides an intensive study of a film genre (e.g., the western, the musical, and the gangster film). Titles vary.

334-3 History and Theory of the Documentary Film
Comprehensive survey of the history of documentary film and an introduction to the theories and approaches used by documentary filmmakers throughout this century. Prerequisite: MP 131.

381-5 16mm Film Production
Production of 16mm film projects under faculty supervision including budgeting, financing, and production. Emphasis on the documentary, business, and industrial film within the free-lance 16mm market. Prerequisite: MP 283.

382-5 16mm Film Production
Production of 16mm film projects under faculty supervision including budgeting, financing, and production. Emphasis on the documentary, business, and industrial film within the free-lance 16mm market. Prerequisite: MP 381.

383-5 16mm Film Production
Production of 16mm film projects under faculty supervision including budgeting, financing, and production. Emphasis on the documentary, business, and industrial film within the free-lance 16mm market. Prerequisite: MP 382.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of motion pictures. Topics vary.

435-3 Studies in Film Criticism
Intensive examination of a selected area of film criticism. Titles vary.

436-3 Studies in Film Production
Provides an intensive study of a selected area of film production. Titles vary. Prerequisite: MP 180.

481-3 Senior Practicum in Filmmaking
Requires production of a 16mm sound film to answer print stage with optical soundtrack, and the organization of a cumulative senior screening including the practicum films. Prerequisite: MP 381.

490-3 Independent Screening
Independent screenings of 25 films chosen by the student to comprise an integrated program of historical/theoretical focus. Screenings to be accompanied by the reading of appropriate analytical commentary under the direction of faculty member. Prerequisite: MP 231, 232, 233, two 300-level film theory courses.

499-1 to 4 Independent Study in Film History, Theory, Criticism, and Practice
Independent work to culminate in thesis and/or film. Prerequisite: MP 332, 333.

Applied Music/MUA
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

Private instruction is offered in the following fields of concentration. Subject to the regulations of the college in which the student is registered, each half-hour lesson per week may carry one or two credit hours per quarter at the undergraduate level, depending on the level of proficiency demonstrated by the student. All students must receive departmental approval before registering in applied music.

110-1 Applied Music
Applied music instruction is available to the general student, regardless of major. Section number designates applied area. Admission required. Half-hour lesson only. Enrollment limited. Department permission required.

111-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.

112-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: Prerequisite: MUA 111.

113-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 112.

121-2 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 121.
123-2 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 122.

141-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.

142-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 141.

143-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music.

211-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 211.

212-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 212.

213-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 213.

221-2 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 221.

222-2 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 222.

223-2 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 223.

241-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 143.

242-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 241.

243-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 242.

311-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 311.

312-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 312.

321-2 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 321.

322-2 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 322.

341-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 341.

342-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 342.
### 411-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 313.

### 412-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 412.

### 413-1 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 411.

### 421-2 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 421.

### 422-2 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 422.

### 423-2 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 423.

### 441-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 441.

### 442-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 442.

### 443-4 Applied Music
Open only to music majors or minors. All students must have auditioned for and have received departmental approval before registering for applied music. Prerequisite: MUA 442.

### Music/MUS

**Note:** See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

### 101-3 Theory of Music
Theoretical study of music including written exercises, form and analysis, and harmony. Corequisite: MUS 151, 152, 153.

### 102-3 Theory of Music
Theoretical study of music including written exercises, form and analysis, and harmony. Corequisite: MUS 151, 152, 153.

### 111-1 Vocal Technique and Diction
Vocal English and Italian diction taught with an emphasis on the IPA phonetic language. Discussion and development of vocal technique, terminology, and anatomy.

### 112-1 Vocal Technique and Diction
Vocal English and Italian diction taught with an emphasis on the IPA phonetic language. Discussion and development of vocal technique, terminology, and anatomy. Prerequisite: MUS 111.

### 113-1 Vocal Technique and Diction
Vocal English and Italian diction taught with an emphasis on the IPA phonetic language. Discussion and development of vocal technique, terminology, and anatomy. Prerequisite: MUS 112.

### 114-3 Fundamentals of Music Theory
Study of basic materials, notation, and reading of music for students with little or no previous music training.

### 117-3 Music Listening IV: Jazz
Historical survey of jazz and related styles from the late 19th century to the present.

### 118-3 Popular Musical Theatre
Survey of popular musical theatre from its origin in classic comic opera to the present. Emphasis on the Broadway musical since the 1940s.

### 121-2 Foundations of Analytical Listening
Aural analysis taught via musical examples from various periods and cultures including non-Western and popular music.

### 122-2 Survey of Musical Styles
Principle types of Western music from ca. A.D. 500 to the present. Aural analysis; forms and styles. Prerequisite: MUS 121.

### 125-1 Beginning Piano I
For nonmusic majors, class instruction in basic keyboard skills, rudiments of music theory, and beginning sight reading.

### 126-1 Beginning Piano II
Continuation of MUS 125. Development of additional keyboard skills. Study of melody, harmony, and rhythm. Prerequisite: MUS 125.

### 127-1 Beginning Piano III
Continuation of MUS 126. Performance of simple music and application of knowledge of musical elements through performance. Prerequisite: MUS 126.
131-1 Beginning Guitar Class I
Focuses on the development of good playing habits through melody and chord playing. Tuning, care of the guitar, and tablature reading covered, various guitar styles demonstrated. Students provide their own instruments. Electric guitars not suitable.

132-1 Beginning Guitar Class II
Based on technique covered in MUS 131, this class concentrates on note-reading, more chords, and accompaniment styles. Prerequisite: MUS 131 or permission of instructor.

133-1 Beginning Guitar Class III
Based on technique covered in MUS 132, this class concentrates on note-reading, more chords, and accompaniment styles, and some aspects of theory. Prerequisite: MUS 132 or permission of instructor.

141-2 Singing in Musical Theatre
Basic music and interpretation of notation. Vocal training with emphasis on musical theatre. For theatre majors only.

142-2 Singing in Musical Theatre
Basic music and interpretation of notation. Vocal training with emphasis on musical theatre. For theatre majors only.

143-2 Singing in Musical Theatre
Basic music and interpretation of notation. Vocal training with emphasis on musical theatre. For theatre majors only.

145-1 Voice Class

146-1 Voice Class

151-1 Sight Singing and Dictation
Corequisite: MUS 101, 102, 103.

152-1 Sight Singing and Dictation
Corequisite: MUS 101, 102, 103.

153-1 Sight Singing and Dictation
Corequisite: MUS 101, 102, 103.

155-1 Keyboard Musicianship
Class instruction in functional keyboard skills including technique, chord construction and connection, improvisation, harmonization, playing by ear, sight reading, score reading, ensemble playing, and performing repertoire pieces.
Prerequisite: Corequisite: MUS 101.

156-1 Keyboard Musicianship
Class instruction in functional keyboard skills including technique, chord construction and connection, improvisation, harmonization, playing by ear, sight reading, score reading, ensemble playing, and performing repertoire pieces.
Prerequisite: MUS 101. Corequisite: MUS 102.

157-1 Keyboard Musicianship
Class instruction in functional keyboard skills including technique, chord construction and connection, improvisation, harmonization, playing by ear, sight reading, score reading, ensemble playing, and performing repertoire pieces.
Prerequisite: MUS 102, 156. Corequisite: MUS 103.

201-3 Music Theory
Continuation of MUS 101, 102, 103. Part-writing, analysis, and harmony on a more advanced level. Prerequisite: MUS 103, 153. Corequisite: MUS 251, 252, 253.

202-3 Music Theory
Continuation of MUS 101, 102, 103. Part-writing, analysis, and harmony on a more advanced level. Prerequisite: MUS 103, 153. Corequisite: MUS 251, 252, 253.

203-3 Music Theory
Continuation of MUS 101, 102, 103. Part-writing, analysis, and harmony on a more advanced level. Prerequisite: MUS 103, 153. Corequisite: MUS 251, 252, 253.

214-3 Music in Western Culture
Introduction to the music of Western culture from the Middle Ages to the present. Emphasis on listening and practical skills; elements of music; major styles, genres, and composers; and cultural context.

215-1 String Methods I
The study of materials, equipment, and class instruction in basic playing and teaching string instruments.

216-1 String Methods II
The study of materials, equipment, and class instruction in basic playing and teaching string instruments.

217-1 String Instruments
Class instruction. Materials and pedagogy.

223-3 Methods in Music: Marching Bands
Materials, techniques, and administration of marching bands in the public school.

224-1 High Brass Methods
Class instruction, materials, and pedagogy for trumpet and horn. Instrument music majors only.

225-1 Low Brass Methods
Class instruction. Materials and pedagogy for trombone and tuba. Instrumental music education majors only.

226-1 Elementary Brass Methods
General survey of brass instruments. Vocal and string majors only.

227-1 Woodwind Methods I
The study of materials, equipment, and class instruction in playing and teaching woodwind instruments in public school.
228-1 Woodwind Methods II
The study of materials, equipment, and class instruction in playing and teaching woodwind instruments in the public school.

229-1 Elementary Woodwinds
General survey of woodwind instruments for vocal and string methods. String or vocal majors only.

231-1 Percussion Instruments
Class instruction. Materials and pedagogy.

251-1 Sight Singing and Dictation
Continuation of MUS 151. Prerequisite: MUS 103, 153. Corequisite: MUS 201, 202, 203.

252-1 Sight Singing and Dictation
Continuation of MUS 152. Prerequisite: MUS 103, 153. Corequisite: MUS 201, 202, 203.

253-1 Sight Singing and Dictation
Continuation of MUS 153. Prerequisite: MUS 103, 153. Corequisite: MUS 201, 202, 203.

255-1 Keyboard Musicianship

256-1 Keyboard Musicianship

257-1 Keyboard Musicianship

261-2 Pronunciation of Foreign Languages
For students of singing. Application of the International Phonetic Alphabet to German and French. Includes intensive readings of song lyrics.

262-2 Pronunciation of Foreign Languages
For students of singing. Application of the International Phonetic Alphabet to German and French. Includes intensive readings of song lyrics.

281-1 Jazz Improvisation I
Basic fundamental scales and principles associated with the jazz tradition. Includes the study and performance of the blues, minor pentatonic, minor seventh, and major scales.

282-1 Jazz Improvisation II
Study and performance of the cycle of fifths through technical jazz exercises designed to complement the highly syncopated rhythms and nonidiomatic melodies found in the music of the Bebop era. Prerequisite: MUS 281.

283-1 Jazz Improvisation III
Introduces popular jazz riffs that have become standard practice among jazz artists of all periods and focuses on grace notes, diminished scales, diminished whole-tone scales, and transcribed jazz solos. Prerequisite: MUS 282.

284-1 Advanced Jazz Improvisation
Introduces both the technical and psychological artistic approach to sound production relating to jazz music and examines important recordings from various periods of jazz history. Prerequisite: MUS 283.

301-3 Counterpoint

302-3 Renaissance Counterpoint
Prerequisite: MUS 203, 253.316-3

311-3 History of Music
From ancient and medieval periods through the 20th century. Prerequisite: MUS 103, 121, 153.

312-3 History of Music
From ancient and medieval periods through the 20th century. Prerequisite: MUS 103, 121, 153.

313-3 History of Music
From ancient and medieval periods through the 20th century. Prerequisite: MUS 103, 121, 153.

314-3 Introduction to Research in Music
Methods of scholarly investigation in music history, theory, and education: music bibliography; emphasis on individual projects and reports. Prerequisite: MUS 122.

316-3 Piano Pedagogy I
History of piano pedagogy. Overview of the teaching and learning process. Study of methods and materials for use with students of various age groups during their first years of piano studies. Prerequisite: MUS 103, 122, and 153 or permission of instructor.

317-3 Piano Pedagogy II
Investigation of individual and group procedures for teaching, rhythm, music reading, pianistic technique, elementary improvisation, and artistic expression. Discussion of repertoire and anthologies. Prerequisite: MUS 316 or permission of instructor.

322-3 Methods in Music: Choral Ensembles
Survey of choral literature appropriate for junior/senior high school ensembles with procedures for rehearsal and performance, curriculum development, and administration of choral programs. Prerequisite: MUS 203, 253. Corequisite: MUS 337.

323-2 Music Education Methods I
Foundations of instrumental music education. Prerequisite: MUS 103, MUS 253.

324-2 Instrumental Music Education Methods II
This course will build on issues raised in MUS 323 and cover techniques, materials, and methods for the school instrumental music program. Prerequisite: MUS 323.
325-2 Instrumental Music Education Methods III
This course will equip prospective teachers and future instrumental conductors with practical and artistorical applications, pedagogical techniques, materials, methods, and literature for school instrumental music programs. Prerequisite: MUS 323 and MUS 324.

327-2 Choral Methods I
Materials and methods for choral music education students with primary focus on elementary and middle school settings. Prerequisite: MUS 335.

328-3 Music in the Elementary School
Materials, techniques, organization, and administration of vocal and general music programs in the public school. Reading components and teaching strategies included. Prerequisite: MUS 203, 253.

329-2 Choral Methods II
Materials and methods for choral general music students with primary focus on junior high and high school settings. Prerequisite: MUS 329.

330-2 Choral Methods III
Materials and methods for choral general music students with primary focus on high school settings. Prerequisite: MUS 327.

331-3 Music Literature: Medieval
Historical study of music of the fifth century to ca. 1450. Emphasis on analysis, theoretical and stylistic concepts, and performance practice. Prerequisite: MUS 203, 313.

332-3 Music Literature: Renaissance
Historical study of music from ca. 1450 to 1600. Emphasis on analysis, theoretical and stylistic concepts, and performance practice. Prerequisite: MUS 203, 313.

333-3 Music Literature: Baroque
Historical study of music from 1600 to 1750. Emphasis on analysis, theoretical and stylistic concepts, and performance practice. Prerequisite: MUS 203, 313.

335-2 Basic Conducting
Basic baton technique and score reading for choral and instrumental conducting. Prerequisite: MUS 122, MUS 152.

336-2 Instrumental Conducting I
This course is designed to enable the student to develop basic knowledge and skills relating to conducting instrumental ensembles in a variety of settings. Combination of lecture, seminar, and lab. Prerequisite: MUS 335.

337-2 Instrumental Conducting II
This course is designed to enable the student to develop intermediate level knowledge and skills relating to conducting instrumental ensembles in a variety of settings. Combination of lecture, seminar and lab. Prerequisite: MUS 335 and MUS 336.

338-2 Instrumental Conducting III
Continuation of MUS 336. Emphasis on rehearsal techniques, comprehensive musicianship, and performance practices. For music majors only. Completion of instrumental laboratory ensemble required. Prerequisite: MUS 336.

339-2 Choral Conducting I
This course is designed to enable the student to develop basic knowledge and skills relating to conducting choral ensembles in a variety of levels and settings. Combination of lecture, seminar, and lab. Prerequisite: MUS 335.

340-2 Choral Conducting II
This course is designed to enable the student to develop intermediate knowledge and skills relating to conducting choral ensembles in a variety of levels and settings. Combination of lecture, seminar, and lab. Prerequisite: MUS 339.

341-2 Choral Conducting III
This course is designed to enable the student to develop advanced knowledge and skills relating to conducting choral ensembles in a variety of levels and settings. Combination of lecture, seminar, and lab. Prerequisite: MUS 340.

342-3 Form and Analysis
Harmonic and formal analysis: motive, phrase, periods, and binary and ternary forms. Prerequisite: MUS 203, 253.

343-2 Orchestration
Tone quality and ranges of orchestral instruments; voice qualities and ranges of choral ensembles; and written assignments in each area. Prerequisite: MUS 203, 253.

355-2 Keyboard Musicianship
This course provides vocal music education majors with functional and technical keyboard skills needed for successful choral music classroom instruction. Prerequisite: MUS 257.

356-2 Keyboard Musicianship
This course provides vocal music education majors with functional and technical keyboard skills needed for successful choral music classroom instruction. Prerequisite: MUS 355.

357-2 Keyboard Musicianship
This course provides vocal music education majors with functional and technical keyboard skills needed for successful choral music classroom instruction. Prerequisite: MUS 356.

365-4 Methods and Materials for Teaching General Music in Grades K–6
Materials and methods for teaching general music in grades K–6. Laboratory session required in addition to regular class meeting times for the purpose of developing skills in sight singing and in the use of traditional classroom instruments.

371-3 Composition
Creative writing in smaller forms for a variety of media. Includes the exploration of various composition styles. Prerequisite: MUS 203.
372-3 Composition  
Creative writing in smaller forms for a variety of media. Includes the exploration of various composition styles. Prerequisite: MUS 371.

373-3 Composition  
Creative writing in smaller forms for a variety of media. Includes the exploration of various composition styles. Prerequisite: MUS 372.

381-3 Electronic Music Composition  
Composition using electronically generated and manipulated sounds. Includes a historical survey of styles and an exploration of tape and synthesizer techniques. Prerequisite: MUS 371.

382-3 Electronic Music Composition  
Composition using electronically generated and manipulated sounds. Includes a historical survey of styles and an exploration of tape and synthesizer techniques. Prerequisite: MUS 381.

383-3 Electronic Music Composition  
Composition using electronically generated and manipulated sounds. Includes a historical survey of styles and an exploration of tape and synthesizer techniques. Prerequisite: MUS 382.

391-3 Music of African Americans 1619 to Present  
Survey of African American music from the 17th century to the present, including its creators, styles, and influences.

402-3 Form and Analysis  
Contrapuntal techniques. Rondo, sonata-allegro forms. Prerequisite: MUS 342.

403-3 Form and Analysis  
Contrapuntal techniques and analysis of 20th century music. Prerequisite: MUS 203, 253, 313.

411-3 Music Literature: Classical  
Historical study of music from 1730 to 1830. Emphasis on analysis, theoretical and stylistic concepts, and performance practice. Prerequisite: MUS 203, 313.

412-3 Music Literature: 19th Century  
Historical study of music from 1820 to 1900. Emphasis on analysis, theoretical and stylistic concepts, and performance practice. Prerequisite: MUS 203, 313.

413-3 Music Literature: 20th Century  
Historical study of music from 1900 to the present. Emphasis on analysis, theoretical and stylistic concepts, and performance practice. Prerequisite: MUS 203, 313.

420-3 Opera Production and Coaching  
For advanced singers in the production of opera; culminates in public performance. Individual coaching for major role assignment. Study and involvement in technical areas of production: set design, building, properties, and costumes. May include participation in Dayton Opera productions.

424-3 Music Theory  
Survey of music theory from Jean Philippe Rameau to the present. Traces lines of thought that have had significant influence on musical study in the 20th century. Prerequisite: MUS 203, 313.

435-3 Studies in Music Literature  
Courses in various aspects of the literature of music, such as Symphonic Literature or Chamber Literature, or focusing on a composer or nationality. Topics vary. Prerequisite: MUS 203, 233 and 313.

441-1 Pedagogy  

442-1 Pedagogy  

443-2 Vocal Pedagogy I  
This course is designed to make students familiar with physiological and psychological aspects of voice so they will better understand their own instruments and will be better equipped to teach others. Prerequisite: MUS 243 or MUA 223.

444-2 Vocal Pedagogy II  
A continuation of the physiological and psychological aspects of vocal student presented in MUS 443. Prerequisite: MUS 443.

451-3 Piano Literature  
Historical survey of music for piano from origins in clavichord and harpsichord in the Renaissance through the 20th century.

452-3 Piano Literature  
Historical survey of music for piano from origins in clavichord and harpsichord in the Renaissance through the 20th century.

453-3 Piano Literature  
Historical survey of music for piano from origins in clavichord and harpsichord in the Renaissance through the 20th century.

455-3 Vocal Literature  
Survey of vocal literature from the 18th through the 20th century emphasizing German lieder, French melodie, English and American art songs, opera, and oratorio. For music majors only. Prerequisite: MUS 313.

456-3 Vocal Literature  
Survey of vocal literature from the 18th through the 20th century emphasizing German lieder, French melodie, English and American art songs, opera, and oratorio. For music majors only. Prerequisite: MUS 313.
457-3 Vocal Literature
Survey of vocal literature from the 18th through the 20th century emphasizing German lieder, French melodie, English and American art songs, opera, and oratorio. For music majors only. Prerequisite: MUS 313.

465-3 Computer Applications in Music
Study of computer technology and music software applications. Emphasis is placed upon using MIDI for electronic score notation, sequencing, and basic coursework design. Two hours lecture, two hours lab. Prerequisite: MUS 203, 253. (Previously listed as MUS 341).

471-3 Advanced Composition
Creative writing that encompasses a variety of media and forms. Includes style exploration and the development of a personal style. Prerequisite: MUS 373.

473-3 Advanced Composition
Creative writing that encompasses a variety of media and forms. Includes style exploration and the development of a personal style.

480-1 to 4 Workshops in Music
Study of selected special topics or problems in music, or special areas of music teaching. Titles vary.

481-1 to 6 Advanced Studies in Special Subjects
Directed research. May be taken for a letter grade or pass/unsatisfactory.

Ensembles
Wright State staff and students not majoring in music may enroll with or without credit. Enrollment open to all students in the university.

144-1 University Brass Choir
A performance-oriented group which provides the student with chamber brass music experience. Students learn elements of ensemble execution, professionalism, brass music history, orchestral styles, and sound production. Audition required.

147-1 University Flute Choir
Performs music of all time periods and styles originally composed for this instrumentation as well as transcriptions of masterworks.

148-1 University Clarinet Choir
Performs music of all time periods and styles originally composed for this instrumentation as well as transcriptions of masterworks.

149-1 Chamber Players
Exploration of performance repertoire composed expressly for small wind ensemble. Works by such composers as Mozart, Strauss, Dvorak, Beethoven, and Stravinsky. Consent of conductor and student’s applied instructor required. Corequisite: MUS 169 or 369.

166-1 Concert Band
Performs band music of all styles. Open to all students without audition.

167-1 Peps Band
Performs jazz, rock, and contemporary music at all home basketball games and for other campus activities. Audition required.

168-1 Jazz Band
A jazz performance-oriented group. Students learn elements of ensemble execution, professionalism, jazz history, jazz styles, and jazz improvisation. Audition required.

169-1 Wind Symphony
Performs original compositions and transcriptions for band and wind ensembles. Audition required.

170-1 University/Community Orchestra

177-1 Chamber Orchestra
Instrumental ensemble, consisting primarily of strings and varying combinations of woodwinds and percussion instruments, devoted to the study and performance of music written for that medium.

190-1 University Chorus
Development of choral and vocal skills. Choral literature from a wide range of historical and compositional styles. No audition required.

192-1 Vocal Jazz Ensemble
Development of performance skills in vocal jazz. Emphasis on jazz style and techniques, improvisation, and jazz theory. Audition required.

193-1 University Men's Chorale
Development of advanced choral and vocal skills. Emphasis on advanced choral literature from a wide range of historical and compositional styles. Audition required.

194-1 University Women's Chorale
Development of advanced choral and vocal skills. Emphasis on advanced choral literature from a wide range of historical and compositional styles. Audition required.

195-1 University Madrigal Singers
Development of advanced choral and vocal skills. Emphasis on advanced vocal chamber literature from 15th through 20th centuries. Audition required.

197-1 Paul Laurence Dunbar Chorale
A choral ensemble for students who desire to explore the musical style of gospel music and its roots and various forms. Includes performances of a body of literature associated with the African American church to the university and surrounding communities.

205-1 Chamber Music
Audition required.

344-1 University Brass Choir
A performance-oriented group which provides students with chamber brass music experience. Students learn elements of ensemble execution, professionalism, brass music history, orchestral styles, and sound production. Audition required.
347-1 University Flute Choir  
Performs music of all time periods and styles originally composed for this instrumentation as well as transcriptions of masterworks.

348-1 University Clarinet Choir  
Performs music of all time periods and styles originally composed for this instrumentation as well as transcriptions of masterworks.

349-1 Chamber Players  
Exploration of performance repertoire composed expressly for small wind ensemble. Works by such composers as Mozart, Strauss, Dvorak, Beethoven, and Stravinsky. Consent of conductor and student’s applied instructor required. Corequisite: MUS 169 or 369.

366-1 Concert Band  
Performs band music of all styles. Open to all students without audition.

367-1 Pep Band  
Performs jazz, rock, and contemporary music at all home basketball games and for other campus activities. Audition required.

368-1 Jazz Band  
A jazz performance-oriented group. Students learn elements of ensemble execution, professionalism, jazz history, jazz styles, and jazz improvisation. Audition required.

369-1 Wind Symphony  
Performs original compositions and transcriptions for band and wind ensembles. Audition required.

370-1 University/Community Orchestra  
Performs orchestral music of all styles and periods.

377-1 Chamber Orchestra  
Instrumental ensemble, consisting primarily of strings and varying combinations of wind and percussion instruments, devoted to the study and performance of music written for that medium. Audition required.

390-1 University Chorus  
Development of choral and vocal skills. Choral literature from a wide range of historical and compositional styles. No audition required.

392-1 Vocal Jazz Ensemble  
Development of performance skills in vocal jazz. Emphasis on jazz style and techniques, improvisation, and jazz theory. Audition required.

393-1 University Men’s Chorale  
Development of advanced choral and vocal skills. Emphasis on advanced choral literature from a wide range of historical and compositional styles. Audition required.

394-1 University Women’s Chorale  
Development of advanced choral and vocal skills. Emphasis on advanced choral literature from a wide range of historical and compositional styles. Audition required.

395-1 University Madrigal Singers  
Development of advanced choral and vocal skills. Emphasis on advanced vocal chamber literature from 15th through 20th centuries. Audition required.

397-1 Paul Laurence Dunbar Chorale  
A choral ensemble exploring the musical style of gospel music and its roots and various forms. Includes on- and off-campus performances of a body of literature associated with the African American church. Audition required.

Nursing/NUR  
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

All of the following courses require admission to the College of Nursing and Health. Course levels must be taken in sequence.

114-2 Nursing Elective  
Special topics.

209-4 Introduction to Professional Nursing  
Explores history of nursing, its response to society, and evolution of contemporary nursing. Emphasizes past, present, and future roles based on selected concepts, models, and theories within the health care systems.

210-2 Introduction to Nursing Informatics  
Introduction to trends and issues of informatics in nursing and health care with an emphasis on effective use of hardware and software in information technology. Laboratory experience included.

212-3 Nursing for Health and Wellness Lifestyle  
Emphasizes concepts, models, theories, and methodologies consistent with a philosophy of health and wellness. Incorporates self-directed activities to promote maximum health in self and others. Pre- or corequisite: NUR 209.

213-3 Field Experience in Health and Wellness  
Explores the impact of cultural, ethical, legal, political, and socioeconomic issues relating to wellness across the lifespan. Promotes the RN student’s philosophy of well-being through self-directed field experiences. Prerequisite: NUR 308. Pre- or corequisite: NUR 212.

214-2 Human Diversity in Health Care  
Examination of human diversity in relation to health/well-being and health care delivery systems. Both global and future orientations of diversity will be considered. Pre- or corequisite: NUR 209.
217-5 Health Assessment Across the Lifespan
Includes development of a systematic approach to obtaining a health history and appraisal, performing physical assessments on individuals throughout the lifespan. Focuses on the well individual in a variety of life settings. Prerequisite: NUR 212, 214, ANT 202, P and B 301. Pre- or corequisite: NUR 210.

218-5 Introduction to Clinical Nursing
Focuses on skills and related concepts basic to clinical practice. Integrates health assessment skills into nursing care and development of nursing diagnosis. Communication for documentation of data base is stressed. Prerequisite: NUR 217, P and B 302, BMB 250. Pre- or corequisite: NUR 306.

304-3 Foundations of Nursing Research
Introduces the basic elements of the research process. Emphasizes the critique and application of research findings to professional nursing practice. Prerequisite: NUR 218, STT 160 or equivalent.

305-3 Legal and Ethical Foundations for Nursing Practice
Examines the theoretical basis of ethical decision making and legal elements of professional nursing practice. Prepares the student for clinical application experience in succeeding courses.

306-3 Concepts of Altered Health States
Focuses on the relationship of normal body functioning and the physiological changes that occur as a result of illness including the body's compensatory mechanisms. Emphasis is placed on alterations in body function and system/organ failure. Prerequisite: ANT 202, P and B 302 or RN status, CHM 102, or equivalent.

307-3 Foundations of Family and Group Nursing
Foundational course in family development from the perspective of family nursing science. Examines the impact of environmental influences on family health. Theoretical frameworks guiding the study and practice of group work will be examined. Pre- or corequisite: NUR 218.

308-5 Theories and Concepts of Professional Nursing
Introductory course oriented toward the continued socialization of the professional nurse with synthesis of concepts, theories, processes, and models to facilitate transition into professional nursing. For registered nurses only.

312-10 Nursing Process: Human Existence and Health II, III
Clinical nursing courses. Focus on the nursing process and the human ability to adapt to one's environment in relation to an optimum state of health. Learning experiences include a variety of settings within and outside the health-care system. Prerequisite: NUR 322, 323, 324.

313-10 Nursing Process: Human Existence and Health II, III
Clinical nursing courses. Focus on the nursing process and the human ability to adapt to one's environment in relation to an optimum state of health. Learning experiences include a variety of settings within and outside the health-care system. Prerequisite: NUR 312.

317-2 to 4 Selected Topics
Topics vary.

321-6 Adult Health and Illness
A clinical course which focuses on adults across the lifespan with altered health states. Emphasis is on providing secondary preventive care in a variety of settings. Prerequisite: NUR 218, PHR 340, NUR 307. Pre- or corequisite: PSY 341.

322-6 Nursing Care of Childbearing Families
A clinical course focusing on the understanding and application of selected concepts related to the childbearing family in the maternity cycle. Prerequisite: NUR 321, 304. Pre- or corequisite: NUR 305.

323-6 Nursing Care of Childbearing Families
A clinical course focusing on children and adolescents in families with a variety of health states in various health care settings. Prerequisite: NUR 321, 304. Pre- or corequisite: NUR 305.

324-6 Nursing Care of Aging/Aged Families
Examines theories, trends, and research in gerontological nursing. Examines the aging self, holistic health and independent function, hospitalization, and nursing management of illness in the aged. Explores advocacy for vulnerable aged. Prerequisite: NUR 307, Pre- or corequisite: 321.

405-3 Theory of Aging/Aged Families
Examines theories, trends, and research in gerontological nursing. Examines the healthy aged, holistic health and independent function, hospitlization and nursing management of illness in the aged. Explores advocacy for vulnerable aged. Prerequisite: NUR 210, 214, 304, 307, 308, 318. For RNs only.

406-2 to 3 Contemporary Nursing Issues and Health Policy
Examines global aspects of the social, political, legal, ethical, and environmental issues influencing health care, health policy, and advancement of the nursing profession. Professional issues confronting contemporary nursing are emphasized. Prerequisite: NUR 322, 323, 324.

407-2 to 3 Nursing Leadership and Management in Health Care
Examination of theories and strategies of leadership and management in the realm of health care. Prerequisite: NUR 322, 323, 324.
411-10 Nursing Process: Human Existence and Health IV
Uses the nursing process with individuals and families adapting to long-term health impairments. Emphasizes the effect of political, social, and environmental forces on accessing the health care system. Related clinical experiences are provided. Prerequisite: NUR 304 and 313.

412-10 Nursing Process: Human Existence and Health V
Uses the nursing process with individuals and families across the life span who are experiencing depleted health states with healthy and impaired communities. Learning opportunities emphasize interdependent and collaborative activities in a variety of settings. Prerequisite: NUR 411 or 318.

413-10 Nursing Process: Human Existence and Health VI
Emphasizes leadership in caring for individuals, families, and communities with multiple health states. Learning opportunities focus on leadership in a variety of settings. Prerequisite: NUR 412.

414-1 to 4 Nursing Elective
Topics vary. Prerequisite: NUR 218.

415-1 to 4 Independent Study
Faculty-directed, individualized study on student-selected topics. Permission of faculty required. Prerequisite: NUR 218.

421-6 Nursing in Mental Health Systems
Focuses on primary, secondary, and tertiary prevention of mental health problems with individuals, families, and groups. Foundations of psychosocial nursing practice are developed. Cultural, biosocial, and sociopolitical forces affecting mental health systems are analyzed. Prerequisite: NUR 322, 323, 324.

422-6 Nursing in Community Health Systems
Clinical course integrating nursing and public health concepts/trends to assess community health needs. Primary, secondary, and tertiary prevention for health of individuals, families, groups, and communities affected by social, political, and environmental forces are stressed. Prerequisite: NUR 322, 323, 324.

423-6 High Acuity Nursing in Complex Health Systems
A clinical course focusing on individuals experiencing life-threatening physiological crises. Integrates physiological, family, and community knowledge with concepts of high acuity care in a variety of settings. Prerequisite: NUR 322, 323, 324.

424-7 Synthesis Practicum in Professional Nursing
Clinical course which assists students in integration of theory and practice with emphasis on complexity of design and management of nursing care for individuals, families, and groups. Provides concentrated clinical practice in selected clinical areas. Graded pass/unsatisfactory. Prerequisite: NUR 421, 422, 423. Corequisite: NUR 408.

425-3 Synthesis Practicum in Professional Nursing
Integration of theories and concepts for transition into professional practice with the evolution of a personal philosophy of nursing. May be taken for letter grade or pass/unsatisfactory. Prerequisite: NUR 406, 407, 422. For RNs only.

462-2 to 3 Advanced Health Assessment
Expands RN’s knowledge of history taking and physical assessment as it relates to clients across the lifespan and in a variety of settings. RNs admitted to completion program only.

498-3 Nursing Honors Seminar
Students discuss selected problems, issues, and special topics related to nursing that are not covered in depth during the usual curriculum. Students identify an area of interest and develop a project proposal for in-depth study. May be taken for letter grade or pass/unsatisfactory. Prerequisite: NUR 304, 321.

499-1 to 3 Nursing Honors Independent Study
Provides an opportunity for development and completion of an honors project using theories and concepts from the humanities, sciences, and nursing. With guidance of a faculty member, students focus on an area of individual study. May be taken for letter grade or pass/unsatisfactory. Prerequisite: NUR 498.

Office Administration/OA
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-1 to 4 Beginning Shorthand
Students with excellent educational backgrounds work with a mentor on the job in a specific career for six weeks and with a facilitator-coordinate for career preparation, and for communication, employability, leadership, technology, and writing skills, throughout the quarter. Must be approved by Workforce Education Director. Prerequisite: participation in an interview involving facilitator/coordinator, liaison, counselor, business representative, and optional fifth person.

201-3 Beginning Shorthand
Development of a vocabulary/writing skill in Gregg shorthand. Permission of instructor required for students with shorthand skills.
202-3 Intermediate Shorthand
Continued vocabulary and writing skill development in Gregg shorthand. Emphasis on dictation and ability to transcribe accurately. Prerequisite: OA 201 or equivalent proficiency; OA 211 or equivalent.

203-3 Advanced Shorthand
Emphasis on dictation, transcription skills and speed building in Gregg shorthand. Prerequisite: OA 202 or equivalent proficiency and permission of advisor.

210-3 Keyboarding
Basic instruction in keyboarding and document formatting with word processing software.

213-3 Advanced Typewriting
Acquired skills and knowledge in keyboarding, word processing, and document formatting are reinforced on an advanced level in the market to dictation of a variety of business communication. Instruction and practice are provided in the use of office dictation/transcription equipment. Two hours lab per week required. Prerequisite: OA 212.

301-3 Beginning Transcription
Advanced dictation, speed building, and introduction to machine dictation in the transcription of marketable documents using word processing software. Prerequisite: OA 203, 212.

401-1 to 4 Office Practicum
Gives students work experience in an actual office environment while being supervised/directed by a college coordinator of business education.

411-3 Office Management and Administration
Provides a solid foundation in the theory and practice of administrative office systems. There is an emphasis on the roles of effective leadership and human relations skills in office administration and supervision. Prerequisite: ED 214 through 221 or equivalent.

Pharmacology/PHR
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

340-3 Pharmacology
Introduction to general principles of pharmacology, drug classification, and mode of action of selected drug agents. Prerequisite: CHM 102; P and B 301, 302.

410-3 Introduction to Pharmacology
Covers basic principles of pharmacology, including dose-response relationships, mechanisms of drug action and resistance, the concept of drug receptors and specific binding, and biological transport and distribution of drugs. Prerequisite: BIO 112; CHM 211.

495-2 to 5 Honors Research in Pharmacology
Experiential learning for honors program students interested in basic biomedical research. Tutorial with laboratory.

499-2 to 4 Undergraduate Research
Experiential learning in which students participate in ongoing research projects. Tutorial with laboratory.

Philosophy/PHL
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

124-3 Social Ethics and Values
Investigation of fundamental ethical issues in our society. Includes such issues as power, law, race, war, population, ecology, violence vs. pacifism, and punishment vs. rehabilitation.

204-3 Great Books: Philosophy
Introduction to selected great books in the history of Western philosophy chosen from each of three eras (ancient/medieval, modern, and contemporary) and examined both within their respective historical frameworks and as an exercise in critical thinking.

211-3 Introduction to Ethics
Survey of the important theories concerning the nature of moral value and obligation.

212-3 Introduction to Metaphysics
Survey of the important theories concerning the nature of reality, mind and body, and freedom and determinism.

213-3 Theories of Knowledge
Survey of the important theories concerning the origin, structure, methods, certainty, and validity of knowledge.

215-4 Inductive Logic
Introduction to the techniques of inductive and probabilistic reasoning with emphasis on the problems encountered in attempting to justify those techniques.

223-4 Symbolic Logic I
Introduction to the techniques of deductive logic including truth-table analysis, the prepositional calculus, and predicate logic.

280-3 Philosophy of Religion: Faith and Reason
(Also listed as REL 280.) Selected cross-disciplinary issues arising from philosophy and religion. Judeo-Christian concept of God, grounds for belief and disbelief, revelation and faith, religious language, verification, immortality and resurrection, and karma and reincarnation. Issues are discussed on the basis of selected texts on faith and reason.
281-3 Philosophy of Religion: Contemporary Western Survey
(Also listed as REL 281.) Cross-disciplinary perspective on philosophical and religious schools of thought in the early 20th century. Absolute and personal idealism, spirit, value, positivism and naturalism, history and culture, modernism and pragmatism, religious consciousness, and phenomenology.

301-4 History of Philosophy
Pre-Socratic philosophers, Plato and Aristotle; Epicureanism, stoicism, skepticism, neo-Platonism, and early medieval philosophy.

302-4 History of Philosophy
Medieval and Renaissance philosophy; Descartes, Spinoza, and Leibniz.

303-4 History of Philosophy
Locke, Berkeley, Hume, Kant, Hegel, Schopenhauer, Nietzsche, logical positivism, process philosophy, and existentialism.

323-4 Symbolic Logic II
Standard notations, principles of inference, formal systems, and methods of proof. Focus on first-order predicate logic. Prerequisite: PHL 223 or instructor permission.

341-4 Aesthetics
Study of theories concerning the nature of the work of art, aesthetic experience, the arts, and beauty.

371-4 Business Ethics
(Also listed as REL 371.) Case study and discussion of ethical issues involved in business transactions and management.

378-4 Ethics and Medicine
(Also listed as REL 378.) Examination of ethical issues confronting society in the areas of medicine and health care, from the perspective of philosophical and theological ethics. Examples include ethics of abortion, euthanasia, experimental medicine, and behavior control.

382-4 Philosophy of Religion: Process
(Also listed as REL 382.) Realism and the revolt against idealism. Cross-disciplinary analysis of major contemporary philosophers and the implications of their thoughts for religion. Focus on Alfred North Whitehead.

383-4 Philosophy of Religion: Secular
(Also listed as REL 383.) Cross-disciplinary analysis of modes of human awareness through which religious meaning is expressed (sensation, morality, beauty, reason, and human relations). Examination of presuppositions of contemporary secular religion in existentialism.

394-4 Existentialism
(Also listed as REL 394.) Representative writers of the existentialist movement.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of philosophy. Topics vary.

401-3 Major Philosophers
Introduction to the major writings of outstanding philosophers. Involves presentation and critical examination of the philosophers' views.

414-4 Philosophy of Law
Survey of the important theories concerning the nature and justification of law, liberty, justice, responsibility, and punishment. Prerequisite: Junior or senior standing or permission of instructor.

415-4 Philosophical Problems
Detailed examination of one of the outstanding philosophical problems—ancient, medieval, and/or contemporary.

431-4 Classical and Medieval Political Philosophy
(Also listed as PLS 401.) Critical examination of the political ideas from 500 B.C. to A.D. 1500 with special attention to Plato, Aristotle, Cicero, St. Augustine, St. Thomas Aquinas, Luther, Calvin, and Machiavelli.

432-4 Modern Political Philosophy
(Also listed as PLS 402.) Critical examination of political ideas from 1600 to 1900, with special attention to Hobbes, Locke, Rousseau, Montesquieu, Hume, Burke, Hegel, Bentham, Marx, and Mill.

442-4 Philosophy and Literature
Examination of philosophical ideas found in literature, philosophical interpretations of literature, and evaluation of theories and aesthetics of literature.

443-4 Asian Religious Philosophy
(Also listed as REL 443.) Central themes in Asian cultures (such as individual, society, and cosmos: appearance and reality; time and history; and karma, freedom, and responsibility) as they have been treated in the philosophical traditions of these cultures.

471-4 Philosophy of Physical Science
Analysis of views concerning scientific explanation, the logic of theory testing, and the ontological status of theoretical entities: philosophical examination of the concepts of space, time, matter, and motion from classical physics to contemporary relativity.

472-4 Philosophy of Social Science
Analysis of views concerning concept and theory formation in the social sciences, problems in objectivity and value justification of Versuch, mechanism vs. teleological explanations, and reductionism.

481-3 to 4 Independent Reading
Faculty-directed readings in philosophic literature.
482-3 to 4 Independent Reading
Faculty-directed readings in philosophic literature.

483-3 to 4 Independent Reading
Faculty-directed readings in philosophic literature.

Physics/PHY

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-1 Principles of Physics Laboratory
Introductory-level laboratory problems. Corequisite: PHY 111.

102-1 Principles of Physics Laboratory

103-1 Principles of Physics Laboratory

105-3 Sounds and Colors
Study of wave motion with an orientation toward phenomena experienced by our senses, such as musical sounds, noise, and the colors occurring in nature. Corequisite: PHY 115.

106-3 Revolutions in Physics
Introduction to astronomy with emphasis on the solar system. Topics include the earth-moon system, other planets and their satellites, space exploration, and theories for the origin of the solar system. Corequisite: PHY 116.

107-3 Stars, Galaxies, and the Cosmos
Introduction to astronomy with emphasis on the universe of stars and galaxies. Covers stellar evolution, astrophysics, and cosmology. Corequisite: PHY 117.

111-4 Principles of Physics
Introduction to fundamental phenomena, principles, and laws of physics. Prerequisite: MTH 128 or 129, or equivalent. Corequisite: PHY 101

112-4 Principles of Physics
Introduction to fundamental phenomena, principles, and laws of physics. Prerequisite: PHY 111. Corequisite: PHY 102.

113-4 Principles of Physics
Introduction to fundamental phenomena, principles, and laws of physics. Prerequisite: PHY 112. Corequisite: PHY 103.

115-1 Sounds and Colors Laboratory
Experiments to illustrate the physical aspects of what we see and hear. Laboratory component of PHY 105 for students using the course to meet the General Education science requirement.

116-1 Revolutions in Physics Laboratory
Astronomical observations and experiments. Laboratory component of PHY 106 for students using the course to meet the General Education science requirement.

117-1 Stars, Galaxies, and the Cosmos Laboratory
Astronomical observations and measurements, laboratory experiments, and a visit to a planetarium. Laboratory component of PHY 107 for students using the course to meet the General Education science requirement.

122-3 Revolutions in Physics
Microscopic structure of matter from the atomistic theory applied to gases and crystals to the underlying structure. Topics include electricity—atomic glue, quantum theory and atoms, the nucleus and nuclear energy, and fundamental particles. Laboratory is listed as PHY 132.

123-3 Sun, Moons, and Planets
Introduction to astronomy with emphasis on the solar system. Topics include the earth-moon system, other planets and their satellites, space exploration, and theories for the origin of the solar system. Laboratory is listed as PHY 133.

125-3 Stars, Galaxies, and the Universe
Introduction to astronomy with emphasis on the universe of stars and galaxies. Topics include stellar evolution, galaxies, origin and evolution of the universe, and astrophysics. Laboratory is listed as PHY 135.

132-1 Revolutions in Physics Laboratory
Experiments stress the relationship of everyday phenomena to basic physical principles. Laboratory component of PHY 122 for students wishing to use course to meet General Education science requirements.

133-1 Sun, Moons, and Planets Laboratory
Astronomical observations and experiments. Laboratory component of PHY 123 for students wishing to use course to meet General Education science requirements.

135-1 Stars, Galaxies, and the Universe Laboratory
Astronomical observations, laboratory experiments, and a visit to a planetarium. Laboratory component of PHY 125 for students wishing to use course to meet General Education science requirements.

200-1 General Physics Laboratory

202-1 General Physics Laboratory

204-1 General Physics Laboratory
Introductory physics laboratory problems in heat, sound, mechanics, and optics. Prerequisite: PHY 240 and 200. Corequisite: PHY 244.

210-3 General Physics
Selected topics in mechanics; introduces use of calculus in interpretation of physical phenomena. Prerequisite: PHY 112, 113; MTH 230.
211-3 General Physics
Selected topics in electricity and magnetism; introduces use of calculus in interpretation of physical phenomena. Prerequisite: PHY 112, 113; MTH 230.

After successfully completing PHY 111, 112, 113, 210, and 211, students may take courses that have PHY 240, 242, and 244 as prerequisites.

215-4 Introduction to Lasers
An elementary introduction to lasers including basic theory, properties of laser light, construction of a laser, types of lasers, measurement of laser emission, laser safety, and laser applications. Primarily for non-physics majors. Prerequisite: MTH 128 or MTH 129, and PHY 113 or CHM 122.

240-4 General Physics
Introductory survey of mechanics for science and engineering students. Introduces the use of calculus in interpreting physical phenomena. Topics include vectors, kinematics, dynamics, energy, momentum, rotation, and statics. Three hours lecture, one hour recitation. Prerequisite: MTH 229 or permission of department. Corequisite: PHY 200, MTH 230.

242-4 General Physics
Introductory survey of electricity and magnetism. Uses calculus in interpreting physical phenomena. Topics include electric field and potential, currents, DC circuits, magnetic fields, and Faraday's law. Three hours lecture, one hour recitation. Prerequisite: PHY 240, MTH 230. Corequisite: PHY 202.

244-4 General Physics
Introductory survey of thermodynamics, oscillations and waves, sounds, fluids, gravity, and optics. Calculus is required in interpreting physical phenomena. Prerequisite: PHY 240 and MTH 230; or permission of department. Corequisite: PHY 204.

245-4.5 Concepts in Physics
An accelerated treatment of fundamental concepts and applications of physics for elementary education majors. Practical observable topics appropriate for presentation to elementary and middle school students will be emphasized. Includes laboratory experiences, demonstrations, and projects. Elementary education majors only. Integrated lecture/lab. Prerequisite: MTH 143, ENG 102, SM 145.

260-4 Introduction to Modern Physics
Introduces phenomenology and theoretical concepts of modern physics, such as special theory of relativity and quantum theory; atomic and molecular structure and spectra; x-rays and solid state physics; nuclear structure, reactions, and natural radioactivity; and instrumentation for nuclear physics research. One hour is devoted to demonstrations and recitations. Prerequisite: PHY 210, 211, or 244; MTH 230.

310-3 Issues in Science
(Also listed as BIO 310, CHM 310, MTH 310, and GL 310.) A writing intensive course dealing with issues in science. Prerequisite: ENG 101, 102; a first-year science course.

315-3 Physics Instrumentation Laboratory I
Physics laboratory experiments with an emphasis on electrical measurements and electronic instruments. Lectures on circuit theory, experiment design, and electronic instruments. 1.5 hours lecture, three hours lab. Corequisite: PHY 260 or permission of instructor.

316-3 Physics Instrumentation Laboratory II
Experiments emphasizing electronic instruments applied to areas such as mechanics, atomic physics, and nuclear physics. Lectures on applications of integrated circuits to experimentation, data analysis, and data presentation. 1.5 hours lecture, three hours lab. Prerequisite: PHY 315.

322-4 Applied Optics
(Also listed as EP 322.) Study of optical instruments by means of both geometrical and physical optics. Theory and application of interferometry and light detection devices. Brief introduction to lasers and holography. Three hours lecture, two hours lab. Prerequisite: PHY 244 or equivalent; MTH 253.

371-3 Analytical Mechanics
Intermediate problems in statics, kinematics, and dynamics; equilibrium of forces, rectilinear motion, curvilinear motion, central forces, constrained motion, energy and moments of inertia, and the Lagrange method. Prerequisite: PHY 210, 211, or PHY 244; MTH 232. Corequisite: MTH 233.

372-3 Analytical Mechanics
Intermediate problems in statics, kinematics, and dynamics; equilibrium of forces, rectilinear motion, curvilinear motion, central forces, constrained motion, energy and moments of inertia, and the Lagrange method. Prerequisite: PHY 210, 211, or PHY 244; MTH 232. Corequisite: MTH 233.

400-3 Properties of Semiconductor Materials
(Also listed as EP 400.) Crystal structure, energy bands, charge carriers, and carrier motion in semiconductors. Electrical and optical properties. P-N junction diodes. Equilibrium, dc, ac, and transient characteristics. Metal-Semiconductor junctions. Device design. Prerequisite: PHY 240, 242, and 244 and CHM 121.

401-3 Semiconductor Device Physics
(Also listed as EP 401.) Structure and characteristics of bipolar transistors, field effect transistors, and other selected devices. Design and computer modeling of devices. Prerequisite: PHY 500/EP 300.
402-3 Semiconductor Device Processing
(Also listed as EP 402.) Survey of the individual processes used in fabricating semiconductor devices. Integration of these processes to produce MOS and bipolar structures. Computer design aids. Prerequisite: PHY 300, 301, or EP 300, 301, or ME 370, or permission of instructor.

420-3 Thermodynamics
First and second laws of thermodynamics; general thermodynamic formulas with applications to matter. Prerequisite: PHY 210, 211 or 244.

421-3 Statistical Thermodynamics
Topics include kinetic theory of gases, Maxwell-Boltzmann statistics, and an introduction to quantum statistics. Prerequisite: PHY 420.

422-5 Introduction to Geophysical Prospecting
(Also listed as GL 422.) Introduction to principles of gravity, magnetic, seismic, electrical, and radioactive prospecting. Four hours lecture, two hours lab. Prerequisite: MTH 229.

424-4 Gravity and Magnetic Exploration
(Also listed as GL 424.) Study of the earth's gravitational and magnetic fields and the application of these principles to resource exploration. Three hours lecture, two hours lab. Prerequisite: PHY 422 or permission of instructor.

432-3 Lasers
(Also listed as EP 432.) Introduction to the physics of lasers including emission and absorption processes in lasing, the factors controlling laser gain, the properties of optical resonators, and a survey of salient features for principal types of lasers. Prerequisite: PHY 260, MTH 233 or permission of instructor.

450-3 to 4 Electricity and Magnetism
Fundamental laws of electricity and magnetism from viewpoint of fields. Maxwell's equations, transient and steady state currents, electric and magnetic properties of matter, and electromagnetic radiation. Prerequisite: PHY 210, 211, or 242; MTH 232, 233.

451-3 to 4 Electricity and Magnetism
Fundamental laws of electricity and magnetism from viewpoint of fields. Maxwell's equations, transient and steady state currents, electric and magnetic properties of matter, and electromagnetic radiation. Prerequisite: PHY 210, 211, or 242; MTH 232, 233.

452-3 to 4 Electricity and Magnetism
Fundamental laws of electricity and magnetism from viewpoint of fields. Maxwell's equations, transient and steady state currents, electric and magnetic properties of matter, and electromagnetic radiation. Prerequisite: PHY 210, 211, or 242; MTH 232, 233.

460-4 Introduction to Quantum Mechanics
Mathematical structure of quantum mechanics. Applications to selected one- and three-dimensional problems with emphasis on atomic structure. Prerequisite: PHY 200, 372; MTH 333.

461-4 Introduction to Solid State Physics
Selected properties of solids and their quantitative explanation in terms of simple physical models. Applications of quantum mechanics to solids. Three hours lecture, two hours lab. Prerequisite: PHY 316, 360.

462-4 Nuclear and Particle Physics
Nuclear properties and models, radioactive decay, nuclear applications, elementary particle properties and interactions, the standard model. Prerequisite: PHY 460.

470-3 Selected Topics
Selected topics in physics. Prerequisite: PHY 372.

480-4 Introduction to Theoretical Physics
Introduction to classical theoretical physics. Emphasis on mechanics, electromagnetic field theory, and mathematical techniques. Prerequisite: PHY 372, 452; MTH 333. Departmental approval required.

481-3 Introduction to Theoretical Physics
Introduction to classical theoretical physics. Emphasis on mechanics, electromagnetic field theory, and mathematical techniques. Prerequisite: PHY 312, 452; MTH 333. Departmental approval required.

482-3 Introduction to Theoretical Physics
Introduction to classical theoretical physics. Emphasis on mechanics, electromagnetic field theory, and mathematical techniques. Prerequisite: PHY 372, 452; MTH 333. Departmental approval required.

488-d to 3 Independent Reading
Prerequisite: PHY 240, 242, 244; or equivalent.

494-3 Senior Projects
Selected problems in experimental and theoretical physics with critical analysis of results.

499-3 Special Honors Research Problems
Special research in a recognized branch of physics, usually related to research carried on by the department. Critical analysis of results required.

Physiology and Biophysics/ P&B

Note: see quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

301-4 Human Physiology I
Subject areas include homoeostasis; cell, nerve, and muscle function; nervous system regulation; and cardiovascular and circulatory systems. Prerequisite: ANT 201, 202, CHM 102, MTH 126 or placement level four, BIO 105 or equivalent, and permission of instructor.
402-3 Semiconductor Device Processing
(Also listed as EP 402.) Survey of the individual processes used in fabricating semiconductor devices. Integration of these processes to produce MOS and bipolar structures. Computer design aids. Prerequisite: PHY 300, 301, or EP 300, 301, or ME 370, or permission of instructor.

420-3 Thermodynamics
First and second laws of thermodynamics; general thermodynamic formulas with applications to matter. Prerequisite: PHY 210, 211 or 244.

421-3 Statistical Thermodynamics
Topics include kinetic theory of gases, Maxwell-Boltzmann statistics, and an introduction to quantum statistics. Prerequisite: PHY 420.

422-5 Introduction to Geophysical Prospecting
(Also listed as GL 422.) Introduction to principles of gravity, magnetic, seismic, and radioactive prospecting. Four hours lecture, two hours lab. Prerequisite: MTH 229.

424-4 Gravity and Magnetic Exploration
(Also listed as GL 424.) Study of the theory of the earth's gravitational and magnetic fields and the application of these principles to resource exploration. Three hours lecture, two hours lab. Prerequisite: PHY 422 or permission of instructor.

432-3 Lasers
(Also listed as EP 432.) Introduction to the physics of lasers including emission and absorption processes in lasing, the factors controlling laser gain, the properties of optical resonators, and a survey of salient features for principal types of lasers. Prerequisite: PHY 260, MTH 233 or permission of instructor.

450-3 to 4 Electricity and Magnetism
Fundamental laws of electricity and magnetism from viewpoint of fields. Maxwell's equations, transient and steady state currents, electric and magnetic properties of matter, and electromagnetic radiation. Prerequisite: PHY 210, 211, or 242; MTH 232, 233.

451-3 to 4 Electricity and Magnetism
Fundamental laws of electricity and magnetism from viewpoint of fields. Maxwell's equations, transient and steady state currents, electric and magnetic properties of matter, and electromagnetic radiation. Prerequisite: PHY 210, 211, or 242; MTH 232, 233.

452-3 to 4 Electricity and Magnetism
Fundamental laws of electricity and magnetism from viewpoint of fields. Maxwell's equations, transient and steady state currents, electric and magnetic properties of matter, and electromagnetic radiation. Prerequisite: PHY 210, 211, or 242; MTH 232, 233.

460-4 Introduction to Quantum Mechanics
Mathematical structure of quantum mechanics. Applications to selected one- and three-dimensional problems with emphasis on atomic structure. Prerequisite: PHY 260, 372; MTH 333.

461-4 Introduction to Solid State Physics
Selected properties of solids and their quantitative explanation in terms of simple physical models. Applications of quantum mechanics to solids. Three hours lecture, two hours lab. Prerequisite: PHY 316, 460.

462-4 Nuclear and Particle Physics
Nuclear properties and models, radioactive decay, nuclear applications, elementary particle properties and interactions, the standard model. Prerequisite: PHY 460.

470-8 Selected Topics
Selected topics in physics. Prerequisite: PHY 372.

480-4 Introduction to Theoretical Physics
Introduction to classical theoretical physics. Emphasis on mechanics, electromagnetic field theory, and mathematical techniques. Prerequisite: PHY 372, 452; MTH 333. Departmental approval required.

481-3 Introduction to Theoretical Physics
Introduction to classical theoretical physics. Emphasis on mechanics, electromagnetic field theory, and mathematical techniques. Prerequisite: PHY 372, 452; MTH 333. Departmental approval required.

482-3 Introduction to Theoretical Physics
Introduction to classical theoretical physics. Emphasis on mechanics, electromagnetic field theory, and mathematical techniques. Prerequisite: PHY 372, 452; MTH 333. Departmental approval required.

488-4 Independent Reading
Prerequisite: PHY 240, 242, 244, or equivalent.

494-3 Senior Projects
Selected problems in experimental and theoretical physics with critical analysis of results.

499-3 Special Honors Research Problems
Special research in a recognized branch of physics, usually related to research carried on by the department. Critical analysis of results required.

Physiology and Biophysics/ P&B

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

301-4 Human Physiology I
Subject areas include homeostasis, cell, nerve, muscle function; nervous system regulation; and cardiovascular and circulatory systems. Prerequisite: ANT 201, 202, CHM 102, MTH 126 or placement level four, BIO 105 or equivalent, and permission of instructor.
325-4 African American Politics
Explores what makes African American politics distinctive from American politics and discusses the prerequisites for effective political and economic leadership in the black community. A major theme of the course is the notion of black power.

331-4 Political Parties

335-4 The American Presidency
General political functions, roles, and structure of the presidential office; limits and opportunities of presidential power; relations with Congress, courts, bureaucracy, the public, and the political party; and presidential personality.

337-4 The Legislative Process
Policy role, political functions, internal structure, and operation of Congress. Secondary concern for state legislatures and non-American legislative bodies.

340-4 Law and Society
Theories of law; in addition to the nature and functions of the judicial process.

342-4 Civil Liberties I: The First Amendment
Cases and related materials on the Bill of Rights and the 14th Amendment with emphasis on the First Amendment freedoms: freedom of speech, of the press, and of religion.

343-4 Civil Liberties II: Due Process and Equal Protection
Cases and related materials on the enforcement of civil rights and liberties through the due process and equal protection claims of the 14th Amendment.

345-4 Public Administration
(Also listed as URS 345.) Nature and scope of public administration, administrative law, and public interest in the administrative process.

346-4 Public Personnel Administration
Methods of employment, training, compensation, and employee relations in various levels of civil service. Examines organizations of public employees.

347-4 American Public Policy Analysis

351-4 Western European Politics
Comparative study of the political systems of Great Britain, France, and West Germany.

352-4 Politics of Nationalism
Comparison of ethnic identity and politics in Western societies including the United States, Canada, Great Britain, and France. Topics include minorities and the welfare state, affirmative discrimination, and African American politics in the United States.

354-4 Governments of Eastern Europe
Introduction to the governments and politics of Eastern Europe, particularly since World War II. Includes current developments in Poland, Czechoslovakia, East Germany, Hungary, Romania, Bulgaria, and Yugoslavia.

356-4 Politics and Society in France
Examines the historic interaction of French culture and politics. Topics include the growth of the French nation and state, French society, the nature of modern politics and institutions, and France's role in world affairs.

358-4 Latin American Politics
Selected issues in the study of Latin American politics with an emphasis on the nature of the state and the role of institutions such as the military and unions in politics. Examples from major South American states and Mexico where appropriate.

360-4 Politics of the Developing Nations
Comparative analysis of various problems, particularly political, confronting developing nations in nation building and development.

364-4 Contemporary African Politics
Political processes and governmental institutions of sub-Saharan Africa; special attention to dynamics of political development and social and economic change. Comparative analysis of selected African political systems.

366-4 Politics of the Middle East
Introduction to governments and politics of the Middle East with special attention to cultural and historical background and the Arab-Israeli conflict.

367-4 Political System of China: The People's Republic
Analysis of political structures and processes of Communist China; focus on dynamic factors of socioeconomic and political development.

368-4 Politics of Vietnam
An examination of the history, demography, politics, culture, and economy of Vietnam.

370-4 International Theory
Study of recent findings in international politics. Explanations of world political developments such as war, alliance formation, and arms races. Prerequisite: PLS 222.

371-4 Current World Problems
Various views and perspectives on selected contemporary problems and trends in international politics.
374-4 International Human Rights
Examines the role of human rights in international relations and considers contending definitions of human rights and debates over policy by focusing on case studies including South Africa, China, Guatemala, and Bosnia.

375-4 Human Rights in the USA
Examines controversies over human rights in the United States and considers contending definitions of human rights and debates over policy by focusing on a range of issues including immigration, pornography, gay rights, race relations, and poverty.

376-4 Peace Studies
Study of war, peace, and current efforts in dealing with international conflict. Examines the roots of war in American society and alternative strategies for elimination of war as an instrument of policy.

380-4 American Foreign Policy
Role of the United States in contemporary international politics and the relationship of the domestic political system to that role. Discussion of current problems. Prerequisite: PLS 222.

381-4 National Security Policies
Study of U.S. national defense and security policy process and the major strategic issues facing the U.S. government. Prerequisite: PLS 200 and major core courses.

382-4 U.S.-Japan Foreign Relations
Examines the course of the relationship between the United States and Japan. Includes political, security, and economic issues.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of political science. Topics vary.

402-4 Classical and Medieval Political Thought
(Also listed as PHL 431.) Critical examination of political ideas from 500 B.C. to A.D. 1500 with special attention to Plato, Aristotle, Cicero, St. Augustine, St. Thomas Aquinas, Luther, Calvin, and Machiavelli.

403-4 Political Thought: Hobbes to Mill
(Also listed as PHL 432.) Critical examination of political ideas from 1600 to 1900 with special attention to Hobbes, Locke, Rousseau, Montesquieu, Hume, Burke, Hegel, Bentham, Marx, and Mill.

404-4 Twentieth-Century Political Thought
Critical examination of 20th-century political theory. Emphasis on nature, methodology, evaluation, existing condition, and future of political thought.

405-4 Feminist Thought
An exploration of feminist interpretations and critiques of Western political theory. An examination of the development of contemporary feminist political thought.

406-4 Globalization Theories and Gender Politics
An examination of globalization theories and the gender politics of global restructuring.

407-4 Seminar in Political Theory
Readings, research, reports, and discussion on selected theorists, topics, and problems. Topics vary.

408-4 Radical Black Thought
Examines radical black thought and philosophy from a Pan-Africanist perspective, focusing primarily on the 20th century.

412-4 Topics in Empirical Political Analysis
Selected topics of methodological or analytical concern in contemporary political research.

420-4 Politics and the Novel
(Also listed as ENG 460) Study and critiques of political themes in works of selected 20th century authors, including social roles, activism, political awareness, power, government and conflict at the individual, institutional and international level. Prerequisite: ENG 102.

425-4 Seminar in Metropolitan Studies
Intensive interdisciplinary treatment of metropolitan studies. Reading and discussion of pertinent theory, methodology, and case studies. Practical research by students.

427-4 Urban Policy Analysis
(Also listed as URS 427) Study of selected urban problems and their relationship to the political environment. Use of simulation gaming to understand community development processes.

428-4 Contemporary African American Problems
The critical pedagogy of this course allows for an in-depth exploration of many problematic issues that assail African Americans from outside and within the black community itself. Several possible explanations and solutions will be addressed.

429-4 Urban Communications Theory
(Also listed as COM 429) Processes and institutions by which individuals and groups communicate in urban environment. Model of an urban communication system developed by interdisciplinary systems approach.

430-4 Seminar in American Politics and Government
Selected topics related to American political institutions and processes. Emphasis on readings, discussion, and research.
316 Course Descriptions

433-4 Public Opinion
Opinion formation in American politics; relationship of opinion to public policy; voting behavior in American elections; role of mass media and political interest groups in policy process; and development of political attitudes and values.

434-4 Political Leadership
Development of political attitudes and values among leaders, activists, and the public. Relationship between personality, political leadership, behavior, and policy.

435-4 Political Corruption in America
Analysis of political corruption in America, including campaigns and elections, graft, the executive branch, congressional ethics, corruption in law enforcement, organized crime, and abuse of authority.

436-4 Criminal Law
Examines the nature of the criminal law and reviews the law pertaining to criminal liability; inchoate crimes; the elements of crimes against persons, property, and habitation; and the defenses to criminal actions.

437-4 Criminal Procedure
Examines the constitutional protections that the individual has when confronting the criminal justice system and examines the case law pertaining to the surrounding the fourth amendment (search and seizure), fifth amendment (self-incrimination), and sixth amendment (right to counsel).

438-4 Environmental Law and Policy
Examines environmental law and policy and reviews the statutory framework pertaining to environmental impact statements, the regulation of air and water pollution, the disposal and cleanup of toxic wastes, and workplace safety.

439-4 Bioethics and Law
Examines the legal implications of new biological technologies, particularly mind and behavior control, genetic engineering, birth and death control, and organ transplantation.

440-4 Constitutional Law
Cases in which provisions of the constitution have been judicially interpreted. Also examines federal systems, separation of powers, and limits on government.

441-4 The American Criminal Justice System
Survey of the American criminal justice system concentrating on political aspects. Police, judges, attorneys, supreme court decisions, crime, and public opinion.

442-4 Administrative Law Procedure
Study of the law controlling the process by which public agencies make and administer policy. Topics include policy formulation and budgeting, legislative delegation, administrative agencies, rule making, and adjudication.

443-4 Public Budgeting
Examination of the major phases of the governmental budget cycle: types of budget; budgetary reform; economic and public policy impact of government budgeting; decision-making process; and legislative/executive relations in budget formation and implementation.

444-4 Seminar in Public Administration
Selected national, state, and local problems with emphasis on legal scope of administrative power and on research methods used by staff agencies. Topics vary.

445-4 Gender Violence and American Politics
Examines gender violence in the United States. Considers the range of violence, its sources, and solutions. Topics include domestic violence, rape, eating disorders, reproductive rights, and pornography.

446-4 International Politics of Gender Violence
Cross-cultural examination of gender violence. Considers the range of violence, its sources, and solutions. Topics include domestic abuse, rape, female genital surgeries, prostitution, and reproductive rights.

447-4 Political Anthropology
(Also listed as ATH 450.) Study of that part of the culture of primitive societies that we recognize as political organization. An attempt is made to show how in less complex (primitive) societies new local communities come into being through fission.

448-4 Soviet Successor States
Examines the political life in the former Soviet Union, with emphasis on the legacy of communism and the role of economics and politics in the transition to democracy.

449-4 Seminar on Comparative Political Systems
Readings, research, reports, and discussion of selected topics and problems. Topics vary.

450-4 Seminar in International Relations
Readings, research, reports, and discussion of selected topics and problems.

451-4 International Law
Study of rules governing the conduct of international politics with emphasis on their relevance to current world problems.

452-4 International Terrorism
Surveys the phenomenon of terrorism: who employs it, how and why it occurs in international politics, and how targets respond to terrorism. The special problems terrorism creates for democracies and the politics of hostage-taking are examined. Prerequisite: PLS 222.

454-4 Politics of Women Terrorists
Examines the political behavior of women in crime and terrorism, including the roles played by women in criminal activities and terrorist groups. Prerequisite: PLS 222.
475-4 Women, Gender, and World Politics
An examination of the position of women and the power of gender in world politics through feminist international relations theory and case studies of women in international politics.

482-4 Legislative Internship
Experiential internship in the office of a state legislator, including office work, constituent assistance, and research. Sophomore standing and permission of instructor required.

484-4 Pre-law Internship
Students volunteer 15 hours per week in Greene County Prosecutor's office. Duties include preparing trial notebooks, legal research, courtroom observation, outreach, and other assistance to the prosecutor's staff.

485-4 Chinese Foreign Policy
Examines foreign policy perspectives of modern Chinese leaders, including historical, political, economical and ideological priorities. Special attention will be given to China-U.S. relations, as well as China's role in international and regional organizations.

486-4 Model U.N. Seminar
Model U.N. is an experiential learning opportunity built around this seminar, with intensive training in research, public speaking, bargaining, and conflict resolution. Culminates at the national collegiate conference in New York, simulating the United Nations.

490-1 to 4 Independent Reading
Supervised individual readings on selected topics. Arranged between students and faculty member directing the study.

491-1 to 4 Independent Research
Supervised individual research on selected topics. Arranged between students and faculty member directing the study.

492-1 to 4 Independent Field Experience
Supervised individual projects. May involve intern programs in local government or other special programs.

493-1 to 4 Contemporary Problems
Advanced study in selected topics that frequently include new developments in the methodology or subject matter of the various sub fields of the discipline.

494-1 to 4 Special Topics
Study of particular political problems of contemporary significance.

Portuguese/POR
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

111-4 Essentials of Portuguese
Introduction to Portuguese with an emphasis on speaking the language. May be taken for a letter grade or pass/unsatisfactory.

112-4 Essentials of Portuguese
Introduction to Portuguese with an emphasis on speaking the language. May be taken for a letter grade or pass/unsatisfactory. Prerequisite: POR 111 or permission of instructor.

Psychology/PSY
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

105-4 Psychology: The Science of Behavior
Consideration of the causes of behavior. Includes physiological processes; learning, memory, and processing of information; perceptual, cognitive, and social changes from birth to old age; and individual differences in thoughts, feelings, and actions.

110-4 The Science of Behavior II
Fundamental principles and practices of psychology are reviewed. Topics include social behavior, adjustment and mental health, motivation and emotion, and perception.

111-4 Introductory Psychology
Introduction to basic concepts in the study of behavior with emphasis on methods of psychology; physiological considerations; motivation, sensation and perception; and learning and cognition.

112-4 Introductory Psychology
Introduction to basic concepts in the study of behavior with emphasis on statistics, psychological tests, development, personality, abnormal behavior, social psychology, and applied psychology.

200-2 to 4 Psychological Study of Contemporary Problems
Restricted psychological problem areas and their implications for modern society and modern intellectual thought. Topics vary. Prerequisite: PSY 105, 110 or PSY 111, 112.

201-4 Divorce: Current Perspectives
Survey of theory, current research, and methodological issues relating to the divorce process, the effects of divorce on children, and professional intervention. Prerequisite: PSY 105, 110 or PSY 111, 112.
202-4 Psychology of Nonverbal Communication
Introduction to the perception of nonverbal sources of information and the impact on physical and cognitive behaviors. Prerequisite: PSY 105, 110 or PSY 111, 112.

203-4 Psychology of Health Behavior
Survey of the contributions of the psychology of health care. The focus is both theoretical and practical, emphasizing the integration of physiological and psychological knowledge. Prerequisite: PSY 105, 110 or PSY 111, 112.

208-4 Environmental Psychology
Effects on behavior of environmental factors such as crowding, noise, pollution, temperature, lighting, and architecture. Applications of psychological knowledge and techniques in dealing with current environmental problems are also considered. Prerequisite: PSY 105, 110 or PSY 111, 112.

209-4 Behavior Modification
Basic survey of the principles of conditioning as they relate to problems in human adjustment. General principles of the psychology of learning are emphasized, but are also applied through cases of interest to a wide variety of helping professionals. Prerequisite: PSY 105, 110 or PSY 111, 112.

210-4 Psychology of Women and Men
Examines the current state of research evidence about sex differences in all aspects of human behavior, as well as patterns of public attitudes about the natures and proper roles of men and women. Prerequisite: PSY 105, 110 or PSY 111, 112.

260-4 Tests and Measurements
Introduction to the construction and use of attitude scales, and aptitude and ability tests in organizational settings, with emphasis on the use of standard tests. Prerequisite: PSY 105, 110 or PSY 111, 112.

261-4 Abnormal Psychology
Overview of facts and theories pertaining to abnormal behavior. Topics include classification and diagnosis, and causes and treatment of abnormal behavior. Prerequisite: PSY 105, 110 or PSY 111, 112.

307-4 Psychology of Nonverbal Communication
Introduction to the construction and use of attitude scales, and aptitude and ability tests in organizational settings, with emphasis on the use of standard tests. Prerequisite: PSY 105, 110 or PSY 111, 112.

311-4 Abnormal Psychology
Overview of facts and theories pertaining to abnormal behavior. Topics include classification and diagnosis, and causes and treatment of abnormal behavior. Prerequisite: PSY 105, 110 or PSY 111, 112.

321-4 Cognition and Learning
Survey of cognitive processes with an emphasis on learning and memory systems. Topics include short-term memory, retrieval mechanisms, conceptual structures, cognitive skill tests (e.g., IQ tests), mnemonic techniques, and amnesias. Prerequisite: PSY 105, 110 or PSY 111, 112.

323-4 Cognition and Learning Methods
Laboratory research in various areas of cognitive psychology. Two hours lecture, four hours lab. Prerequisite: PSY 300, 321.

331-4 Psychology of Personality
Review of contemporary theories of personality and associated research methodology. Prerequisite: PSY 105, 110 or PSY 111, 112.

333-4 Personality Research Methods
Laboratory experience in research techniques related to experimental personality. Examines problems of design with students expected to develop and implement a research proposal. Two hours lecture, four hours lab. Prerequisite: PSY 300, 331.

341-4 Lifespan Developmental Psychology
Survey of theory, research, and methodological issues in the study of development across the life-span. Prerequisite: PSY 105, 110 or PSY 111, 112.

343-4 Developmental Psychology Methods
Survey of research design appropriate to developmental analysis, innovations in developmental methodology, and laboratory experience in the selection, design, and analysis of developmental problems of specific interest to individual students. Two hours lecture, four hours lab. Prerequisite: PSY 300, 341.

351-4 Social Psychology
Survey of current theories and experimental findings regarding the determinants of social behavior. Prerequisite: PSY 105, 110 or PSY 111, 112.

353-4 Social Psychology Methods
Laboratory course in methods and problems involved in social psychology research. Two hours lecture, four hours lab. Prerequisite: PSY 300, 351.
361-4 Conditioning and Learning
Introduction to experimental findings and contemporary theories of conditioning, learning, and motivation. Prerequisite: PSY 105, 110 or PSY 111, 112.

363-4 Conditioning and Learning Methods
Problems and methods of research in conditioning, learning, and motivation. Two hours lecture, four hours lab. Prerequisite: PSY 300, 361.

371-4 Perception
Study of the active processes by which organisms gather, interpret, and respond to environmental stimuli. Prerequisite: PSY 105, 110 or PSY 111, 112.

373-4 Perception Methods
Laboratory experience and research techniques in various areas of perception. Two hours lecture, four hours lab. Prerequisite: PSY 300, 371.

391-4 Physiological Psychology
Physiological mechanisms of behavior. Emphasis on motivational systems and learning. Prerequisite: PSY 105, 110 or PSY 111, 112 (no prerequisite for biological sciences majors).

392-4 Advanced Physiological Psychology
Physiological mechanisms of behavior. Emphasis on motor and sensory systems. Prerequisite: PSY 391.

393-4 Physiological Psychology Methods
Laboratory exercises in neuropsychology. Two hours lecture, four hours lab. Prerequisite: PSY 300, 392.

400-4 Advanced Research Design and Quantitative Analysis
Use of factorial designs and multivariate tests in psychological research. Prerequisite: PSY 300.

401-4 Advanced Experimental Design: Packaged Computer Programs
Focus on the use of canned computer programs such as SPSS, SAS, and BIOMED in the design, analysis, and interpretation of behaviorally oriented research. Prerequisite: PSY 300, 400.

411-4 Advanced Topics in Abnormal Psychology
Theories and research relating to causes, symptoms, and influences of abnormal behavior. Prerequisite: PSY 311.

419-4 Advanced Topics in Physiological Psychology
Detailed examination of selected areas in physiological psychology. Prerequisite: PSY 391.

421-4 Advanced Topics in Cognition and Learning
Detailed examination of selected areas in cognition and learning. Prerequisite: PSY 321.

425-4 Human-Computer Interface
Relationship of human cognitive, perceptual, and language processes to the effective operation of computer systems. Review of research and theory. Prerequisite: PSY 321, CS 142.

429-4 Advanced Topics in Interpersonal Relations
Interpersonal relations as a subject of research and theory. Consideration of application to therapeutic intervention and everyday interaction. Prerequisite: PSY 331 or 351.

431-4 Advanced Topics in Personality
Review of selected topics in personality. Selected personality constructs and their measurement (e.g., need for achievement, self-concept) as well as situational determinants of behavior. Prerequisite: PSY 331.

432-4 Practicum in Applied Psychology
Work under supervision in an applied psychological setting consistent with students' individual interests (e.g., mental health agency, industrial, or organizational setting). Graded pass/unsatisfactory.

433-4 Developmental Psychopathology
Survey of theoretical approaches to the description and explanation of childhood psychopathology, overview of current research in the area of childhood psychopathology, and description of methodological problems involved in clinical research with children. Prerequisite: PSY 300 and 341.

439-4 Theory and Research in Clinical Psychology
Overview of contemporary clinical approaches, research techniques, and empirical data. Prerequisite: PSY 331, 411.

441-4 Advanced Topics in Developmental Psychology
Development of learning and cognition in children covered in depth. Prerequisite: PSY 341.

443-4 Psychometrics
Emphasis on measurement theory and its applications including concepts of reliability, validity, discrimination, and prediction. Prerequisite: PSY 300.

444-4 Advanced Industrial Psychology
Theories and research findings in selected topics in industrial psychology. Prerequisite: PSY 300, 304 or permission of instructor.

445-3 Unifying Concepts and Processes in Science and Developing Problem-Solving Abilities I
Design, implementation, and assessment of pre-college science activities congruent with the national and state science models and for development of problem-solving abilities. Practice in facilitating these activities.

447-4 Psychology of Aging
Overview of the theoretical, methodological, and conceptual issues in the study of human aging. Focus on both current research and applied relevance. Prerequisite: PSY 111, 112, 341.

450-4 Biofeedback: Research and Application
Introduction to biofeedback in the context of general behavior theory of learning. Literature is surveyed. Topics include problems of methodology and experimental design and application to problems in clinical psychology. Prerequisite: PSY 361.
451-4 Advanced Topics in Social Psychology
Detailed examination of selected areas of current research in social psychology. Prerequisite: PSY 351.

465-4 Information Processing
Study of information processing skills such as selective attention, pattern recognition, reading, problem solving, and human performance. Prerequisite: PSY 321.

471-4 Advanced Topics in Perception
Emphasis on modern controversial issues and theories. Prerequisite: PSY 371.

475-4 Signal Detection Theory in Psychology
Presents signal detection theory in the context of Thurstonian scaling and statistical decision theory. Studies the application of signal detection theory in various areas of psychology including psychophysics, memory, physiology, and psycholinguistics. Prerequisite: PSY 300.

478-4 Animal Behavior
Physiology, phylogeny, and ontogeny of behavior. Prerequisite: BIO 112, 114, 115; or BIO 105, 106, 107; or PSY 111, 112, 300.

481-4 History of Psychology
Major trends in the development of psychology from its beginnings to the modern period.

488-1 to 4 Seminar in Special Topics
Topics vary.

489-2 Honors Seminar
Primarily derived from current honors thesis research. Literature surveys, experimental designs, and special analytical problems presented and discussed by students and faculty. Topics vary.

490-1 to 4 Independent Readings
Specific topics selected by students and instructor. Graded pass/unsatisfactory.

498-1 to 4 Independent Research
Original problems for investigation. Graded pass/unsatisfactory.

499-1 to 4 Honors Research Project
Original problems for investigation leading to a psychology department honors thesis.

Regional Studies/RST/RSE

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

RSE 260-3 Asia: China
Brief introduction to Asian environments and cultures and a detailed examination of the development of China and of the conflict between traditional values, cultural patterns, and current development efforts.

RST 270-3 Regional Studies: Africa
Introduction to African environments; diversity of cultural heritages; changes due to modernization; colonialism, slavery, and independence; a brief survey of the relations of Africa to other non-Western regions; and the contribution of Africa to world civilization.

RST 280-3 Regional Studies: Latin America
Survey of non-Western societies including Indians, mestizos, blacks, and the peasantry, from pre-Columbian and African origins to the present, in terms of ideology, organization, social structure, culture, and economic activities.

RST 290-3 Regional Studies: The Middle East
Introduction to the history, peoples, cultures, and geography of the Middle East from Mauritania to Pakistan from the seventh century to the present.

Rehabilitation/RHB

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-4 American Sign Language I
Introduction to manual communication for professionals preparing to work in rehabilitation or anyone interested in learning sign language.

102-4 American Sign Language II
Continuation of the introduction to manual communication. Emphasis is on conversational skills. Aspects of deafness are covered through speakers and readings. Prerequisite: RHB 101.

103-4 American Sign Language III
Emphasis on skill improvement in American Sign Language. Aspects of deafness are covered through an off-campus field experience. Prerequisite: RHB 101. RHB 102.

201-4 Introduction to Rehabilitation
Philosophy, history, and development of rehabilitation. Familiarizes students with areas considered when providing services to people with physical and/or mental disabilities. Students also obtain an understanding of the rehabilitation code of ethics and sociocultural influences.

202-4 Rehabilitation Resources
Prepares students to locate and evaluate the local, state, and federal resources available to meet the needs of persons with disabilities. Students will visit community agencies and volunteer in a community agency of their choice for a minimum of 25 hours during the quarter.
213-3 Introductory Field Experience in Rehabilitation Services
Seventy-five clock hours of supervised field experience intended to acquaint community/rehabilitation services students with career options, with the structure and administrative procedures of various human services agencies, and with the application of client-intake procedures. Prerequisite: RHB 201.

214-3 Rehabilitation Services Interviewing
Introduction to the role of the rehabilitation services aide in the client-intake process, and how this process occurs within the organizational structure of human services agencies. Prerequisite: RHB 201.

223-3 Advanced Field Experience in Rehabilitation Services
Seventy-five clock hours of supervised field experience intended to provide community/rehabilitation services students with in-depth knowledge of the structure and processes of a selected agency, the job description duties of the rehabilitation services aide within this agency, and the special social, personal, and vocational needs and problems of the target client population. Prerequisite: RHB 201, 213, 214.

228-4 American Sign Language IV
This intermediate course develops grammatical and vocabulary competency in sign formation, vocabulary, morphology, syntax, and discourse. Prerequisite: RHB 101, 102, 103 or permission of instructor.

229-4 American Sign Language V
Higher level grammatical features of American Sign Language are covered to enhance receptive and productive mastery of its grammar and vocabulary. Practical application of conversational and interactive scenarios are also covered. Prerequisite: RHB 101, 102, 103, 228, or instructor permission.

230-4 American Sign Language VI
Interactive scenarios mastering grammar and vocabulary are covered via telling life events, describing events in time, asking for clarification, correcting, conforming, elaborating on information, agreement/disagreement resolving conflicts, and giving direction. Prerequisite: RHB 101, 102, 103, 228, 229, or instructor permission.

301-4 Medical Aspects of Rehabilitation I
Introduction to medical terminology and system disorders that usually have continued and long-standing residual effects and that commonly require rehabilitation intervention. Considers how disabling conditions impact vocational and social activities of daily living. Attention given to the pharmacological aspects of treating disabilities. Prerequisite: BIO 105, 106, 107, RHB 201.

303-4 Strategies for Employing Persons With Disabilities
Overview of job development and job placement techniques. Various methods to access the job market through job seeking skills, resume preparation, occupational information, and job analysis are discussed. Attention is given to attitudinal and architectural barriers that people with disabilities may encounter in their job search process. Prerequisite: RHB 201, 301.

304-4 Rehabilitation Casework
Assists students in acquiring skills in interviewing, case recording, writing rehabilitation plans with appropriate justifications, and case management. Prerequisite: RHB 201, 202, 301.

305-4 Substance Abuse: Societal and Human Issues
Provides an overview of the social, cultural, and psychophysiological effects of substance abuse. Emphasis is on alcoholism and other popular mind-altering drugs. Prerequisite: RHB 201, 301 or permission of instructor and junior standing.

370-1 to 3 Independent Study/Minor Problems in Rehabilitation
Independent study in areas of interest to students that are not readily available in any existing course. Topics vary. May be taken for letter grade or pass/unsatisfactory.

401-4 Mental Retardation/Psychiatric Disabilities
Introduction to the etiology, signs, symptoms, and rehabilitation of people with mental retardation/psychiatric disabilities. Prerequisite: RHB 201, 301; PSY 311.

402-4 Career Assessment
The course will assist students to develop skills in test administration, scoring, interpretation, behavior observation, report writing, and the development of comprehensive career path for the individual being assessed. Hands-on experience will be an integral part of the course. This course is a WAC course for the rehabilitation services major/minor. Prerequisite: RHB 202, 301, 303, 401.

403-4 to 12 Rehabilitation Practicum
Rehabilitation community field placement will assist the integration of skills learned throughout the program. Requires 400 clock hours of field work supervised by faculty and the agency. Prerequisite: RHB 201, 202, 301, 303, 304, 401, 402, 407; CNL 461, 467; and the currently required GPA.

404-4 Independent Living/Rehabilitation Technology
Discusses the history and current philosophy/application of the independent living movement and rehabilitation technology in rehabilitation services. Process will be addressed in this course. Prerequisite: RHB 201, 301, 303, 401, 402.
407-4 Principles of Rehabilitation Counseling
Focuses on the development of basic skills and attitudes associated with rehabilitation counseling. Interview style and format are examined along with listening and responding techniques associated with holistic approaches. Prerequisite: RHB 201, 202, 301, 304; CNL 461.

432-3 Death, Dying, And Grieving
(Also listed as HPR 432.) A course in death, dying, and griefing for health educators who deal with grief and loss in situations such as death, dying, survivorship, children and loss, second marriages, suicide, and other events of trauma.

470-1 to 3 Special Topics
Special workshop courses to meet the needs of in-service rehabilitation professionals as well as providing courses on a one-time basis to meet specific interests. May be taken for letter grade or pass/unsatisfactory.

499-1 to 4 Special Problems in Rehabilitative Sciences
Enables students to explore selected research topics related to the rehabilitation of various patient populations. Students and faculty advisors interact to establish specific course requirements.

Religion/REL

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

204-3 Great Books: The Bible and Western Culture
Study of selected Biblical writings viewed in their original cultural contexts and chosen to reflect the varieties of Biblical literature, the Bible's relationship to various societies, and its role in the development of Western culture.

205-3 What is Religion?
Explores the question of the meaning of religion by looking at various ways in which people experience and express it. Diverse examples of religion and religious life are considered.

206-3 Eastern Religions
General introduction to the major religious traditions of South Asia and East Asia: Hinduism, Buddhism, Confucianism, Taoism, and Shintoism.

207-3 Western Religions
General introduction to the major religious traditions of Judaism, Christianity, Islam, and other selected religious traditions.

208-3 Contemporary Issues in Religion
Study of selected problems, ideas, and religious developments that have become important in contemporary society.

220-3 Hebrew Scripture (Old Testament)
Introduction to the literature, history, and religion of ancient Israel.

221-3 Between the Testaments
Introduction to the literature and religion in Jewish sects from the Exile (ca. 500 B.C.E.) to the Mishnah of Judah the Prince (200 C.E.), including the Dead Sea Scrolls.

222-3 Literature and Religion of the New Testament
Introduction to the literature, history, and religion of early Christianity.

231-3 Religion and the American Experience
Survey of different religions in the United States with attention to the growth of a distinctive form of religion shaped by the American experience.

235-3 Introduction to the Afro-American Religious Experience
Survey of the black American religious experience from the colonial era to the present. Examines what black American religion is and the role it plays in the sociopolitical life of Afro-Americans.

245-3 World Religions
Comparative study of the role of religion in cultures and societies on the international scene.

246-3 African Religion
Focuses on the religious concepts and practices of premodern African tradition.

270-3 Approaches to Religious Ethics
Examination of various religious ethical systems from diverse cultural situations.

280-3 Philosophy of Religion: Faith and Reason
(Also listed as PHL 280.) Selected cross-disciplinary issues arising from philosophy and religion; Judeo-Christian concept of God, grounds for belief and disbelief, revelation and faith, religious language, verification, immortality and resurrection, and karma and reincarnation. Issues are discussed on the basis of selected texts on faith and reason.

281-3 Philosophy of Religion: Contemporary Western Survey
(Also listed as PHL 281.) Cross-disciplinary perspective on philosophical and religious schools of thought in the early 20th century. Absolute and personal idealism, spirit, value, positivism and naturalism, history and culture, modernism and pragmatism, religious consciousness, and phenomenology.

290-3 Current Problems
Investigation and discussion of a single current problem in the field of religion.

300-3 Religion in America
Concentrates on specific segments of American religious life. Focuses on one or more distinctive religious groups or movements in the context of American history and culture.

310-4 Early and Medieval Western Religious Thought
Survey of important themes in religious thought of the major Western traditions. Selected readings from primary sources and secondary interpretations.
311-4 Reformation and Modern Western Religious Thought
Survey of important themes in the religious thought of the major Western traditions. Selected readings from primary sources and secondary interpretations.

315-4 Christianity
Examination of the structures of religious experience that have shaped the development of Christianity in history. Institutional and ritual forms are investigated as systems of meaning against the backdrop of the general history of religions.

316-4 Judaism: Faith and People
Examination of Judaism as a religious faith and people, with special reference to formative historical, social, ethnic, and cultural factors.

318-4 Contemporary Jewish Thought
Examination of the major themes and issues in the works of contemporary Jewish thinkers (e.g., Borowitz, Herberg, Fackenheim, Kaplan, Rothschild, Heschel, Rubenstein, and Weisel).

321-4 Religions in the Biblical Period
Examination of selected religious movements and/or problems in the Biblical period, and their interconnectedness and mutual influences.

322-4 Topics in Biblical Literature
Examination of selected aspects of Biblical literature from both literary and historical perspectives to explore the possible structures, functions, and meanings of this literature for its original community.

330-4 Topics in American Religion
Examination of selected topics in American religion to investigate its basic religious structures and to explore the relationship of religious phenomena to their cultural context.

331-4 New Religious Movements in America
Considers a variety of new religious movements in America, including Shakers, Mormons, Seventh-Day Adventists, and Jehovah's Witnesses.

332-4 Women and Religion in America
General examination of the role women have played in American religious history, with special reference to the diversity of women's religious experiences.

340-4 Topics in Asian Religion
Studies in the religious dimension of Asian cultures with attention to historical, social, and aesthetic perspectives.

341-4 Islam
Study of the origin and development of Islam including contemporary issues and problems.

344-3 Religion in Japanese Life
Examination of the role of religion in Japanese culture and society with attention to both historical development and current issues.

357-4 Understanding Death
Basic issues in death and dying using resources from human sciences and humanities in religious perspective.

361-4 Religion and Society
(Also listed as SOC 361.) General treatment of religion as a social institution, examining the influence of religious ideas and organizations on other social institutions and the influence of society on religion.

362-3 Anthropology of Religion
(Also listed as ATH 346.) Anthropological approach to the meaning and function of religion in social life and the nature of the thought or belief systems that gave rise to different forms of religious life; emphasis on primitive and peasant societies.

363-4 Religion and Psychology
Introduction to selected themes, issues, and problems in the interaction of religion and psychology. Differing points of view are considered.

365-4 Religion and Politics in America
(Also listed as PLS 315.) General examination of both the historical and the contemporary relation between religion and politics in the United States, with special reference to church/state separation.

370-4 Studies in Ethics
Special topics for intensified study of the ethical dimensions of a particular religious tradition or for concentrated study in theoretical or practical ethical problems. Topics vary.

371-4 Business Ethics
(Also listed as PHL 371.) Case studies and discussion of ethical issues involved in business transactions and management.

378-4 Ethics and Medicine
(Also listed as PHL 378.) Examination of ethical issues confronting society in areas of medicine and health care, from perspective of philosophical and theological ethics. Examples include ethics of abortion, euthanasia, experimental medicine, and behavior control.

382-4 Philosophy of Religion: Process
(Also listed as PHL 382.) Realism and the revolt against idealism. Cross-disciplinary analysis of major contemporary philosophers and the implications of their thoughts for religion. Focus on Alfred North Whitehead.

383-4 Philosophy of Religion: Secular
(Also listed as PHL 383.) Cross-disciplinary analysis of modes of human awareness through which religious meaning is expressed (sensation, morality, beauty, reason, and human relations). Examination of presuppositions of contemporary secular religion in existentialism.
390-4 Studies in Selected Subjects
Problems, approaches, and topics in the field of religion. Topics vary.

394-4 Existentialism
(Also listed as PHL 394.) Representative writers of the existentialist movement.

435-4 Black American Religious Thought
Analysis of black American religious thought through critical study of the writings of selected figures who have helped shape black religion from 1780 to the present.

443-4 Asian Religious Philosophy
(Also listed as PHL 443.) Perennial themes in Asian cultures (such as individual, society, and cosmos; appearance and reality; time and history; karma, freedom, and responsibility) as they have been treated in the philosophical traditions of these cultures.

456-4 Religious Themes in Literature
(Also listed as ENG 460.) Provides intensive study of literary works in terms of significant and recurring religious themes and images as they can be traced in various cultures and literary traditions.

479-3 Ethics in an Industrial Society: The Responsibility of Business in Society
Ethical responsibilities of business in light of political, moral, social, and religious considerations. Emphasis on analysis and evaluation of the changing framework of responsibilities facing both business organizations and their leaders.

487-4 Evolution, Religion, and Ethics
(Also listed as BIO 417.) Introduction to the biological, philosophical, theological, and ethical aspects of evolution.

490-1 to 4 Independent Reading.
Topics vary.

493-4 Seminar in Religion
Topics vary.

494-4 Independent Undergraduate Research in Religion
Intensive consideration of problems and issues in a given area of religious study; topics determined in consultation between students and department. Graded pass/unsatisfactory at discretion of department.

497-4 Senior Project
Guided research culminating in a major paper on a topic chosen by the student and the instructor. Students develop a comprehensive bibliography, prepare a detailed outline, and write and revise the final project.

498-3 Workshop
Intensive study of selected problems (e.g., the teaching of religion in the secondary school, medical ethics) to meet particular needs of participating students. Topics vary.

Russian/RUS
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-4 First-Year Russian
Study of vocabulary and structure of the Russian language; practice in conversation, reading, and writing.

102-4 First-Year Russian
Study of vocabulary and structure of the Russian language; practice in conversation, reading, and writing.

103-4 First-Year Russian
Study of vocabulary and structure of the Russian language; practice in conversation, reading, and writing.

201-4 Second-Year Russian
Grammar review, reading, and discussion of selected texts with practice in speaking and writing. Prerequisite: RUS 103.

202-4 Second-Year Russian
Grammar review, reading, and discussion of selected texts with practice in speaking and writing. Prerequisite: RUS 201 or equivalent.

203-4 Second-Year Russian
Grammar review, reading, and discussion of selected texts with practice in speaking and writing. Prerequisite: RUS 202 or equivalent.

Science and Math/SM
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

145-3 Foundations in Scientific Literacy and Problem Solving
Fundamental concepts in science treated in an interdisciplinary way and integrated with mathematics. Emphasis on development of science process skills and problem-solving abilities. Introductory experience to a constructivist and cooperative learning environment. Prerequisite: MTH 126 or 127 or level four on math placement test.

198-2 Introduction to Science and Mathematics
Introduces students to curriculum, activities, services, and associations within the College of Science and Mathematics. Emphasis is placed on developing study skills, critical thinking processes, and career preparation in science and math. Graded pass/unsatisfactory.
199-2 to 6 Topics in Science and Mathematics
445-3 Projects in Science
An exercise in the application of data collection and analysis to an assigned small group project, reflecting aspects of the four basic sciences. 1 hour meeting and outside project. Prerequisite: PHY 245, CHM 245, GL 345, BIO 345.

Social Work/SW

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

270-4 Social Work as a Profession
Introduction to the profession: historical development, value base, social systems perspective on social problems, and major fields of practice. Includes required knowledge, skills, and values; critical thinking; problem solving; self-awareness; and appreciation of racial, ethnic, and cultural pluralism.

271-4 Social Welfare and Social Services
Study of social welfare and social services in society: introduction to generalist social work practice; continued career testing. Agency-based field project required. Prerequisite: SW 270.

375-4 Human Behavior in Social Functioning
Analysis of human behavior in assessment of social functioning as it relates to social work intervention. Includes ego psychology, social-systems theory, role theory, and learning theory. Prerequisite: SW 271.

380-4 Basic Practice Theory
Foundation sequence of generic social work practice theory. Problem assessment, data collecting, data analysis, intervention methods, and evaluation procedures. Introduction to task-centered approach. Prerequisite: SW 271.

389-2 to 4 Seminar on Special Problems inSocial Work Practice
Selected topics related to current issues in social work practice; readings, research, and discussion.

394-2 to 4 Readings in Social Work
May be taken for letter grade or pass/unsatisfactory.

462-4 Social Gerontology
(Also listed as SOC 462.) Study of social aspects of aging, the needs of the aging population, and society's response to these needs.

463-4 Social Gerontology II
Continuation of social gerontology. Prerequisite: SW 462 or equivalent experience.

464-4 Racial and Ethnic Awareness in the Human Services
Impact of racism and ethnicity on the delivery of human services. Examination of interpersonal relationships and institutional policies and procedures; provides opportunity to develop strategies for change at both levels. Prerequisite: SW 270, 271, and 380.

470-4 Social Welfare Policy
Development, status, and effectiveness of social welfare policies. Application of social work values and knowledge to current policies, programs, and services. Prerequisite: SW 375, 380, and 490.

480-3 to 4 Gerontology Practicum
Supervised learning under direction of faculty and agency staff. 10 weeks/20 hours per week, or 20 weeks/10 hours per week. Prerequisite: SW 462/SOC 462.

481-4 Generalist Practice with Individuals
In-depth study of generalist social work practice theory for the enhancement of social functioning of individuals. Prerequisite: SW 375, 380, and 490.

482-4 Generalist Practice with Groups
In-depth study of generalist social work practice theory for the enhancement of social functioning of small groups. Prerequisite: SW 375, 380, and 490.

483-4 Generalist Practice with Families
In-depth study of generalist social work practice theory for the enhancement of family social functioning. Prerequisite: SW 375, 380, and 490.

484-4 Generalist Practice with Organizations and Communities
In-depth study of generalist social work practice theory for the enhancement of social functioning in social welfare organizations and communities. Prerequisite: SW 375, 380, and 490.

487-4 to 12 Practicum in Social Work I
Application of theory to practice in agency settings. Individual supervised learning experiences and on-site seminars under direction of instructor and agency staff. Prerequisite: SW 481.

488-4 Practicum in Social Work II
Application of theory to practice in agency settings. Individual supervised learning experiences and on-site seminars under direction of instructor and agency staff. May be taken for letter grade or pass/unsatisfactory. Prerequisite: SW 487.

489-4 to 6 Practicum in Social Work III
Application of theory to practice in agency settings. Individual supervised learning experiences and on-site seminars under direction of instructor and agency staff. May be taken for letter grade or pass/unsatisfactory. Prerequisite: SW 487, 488.

490-4 Research Methods in Social Work I
Sequential study of evaluative research design methodology. Development of criteria for the selection and intelligent use of research reports. Evaluation of selected research reports for relevance to social work practice. May be taken for letter grade or pass/unsatisfactory. Prerequisite: SW 271.
491-3 Research Methods in Social Work II
Sequential study of evaluative research design methodology. Development of criteria for the selection and intelligent use of research reports. Evaluation of selected research reports for relevance to social work practice. May be taken for letter grade or pass/unsatisfactory. Prerequisite: SW 490.

Sociology/SOC

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information. SOC 200 is prerequisite for all 300- and 400-level courses.

200-3 Social Life
Introduction to the processes through which individuals become members of groups, organizations, institutions, and societies, and how human social interactions lead to changes in social life and structures.

201-3 Modern Society
Problems facing modern society and possible solutions. Exploration of such questions as: What is the nature of modern society? How are modern political, economic, and educational systems organized?

202-1 SIMSOC (Simulated Society)
SIMSOC is a learning game designed to supplement the materials covered in introductory sociology courses. The game involves students as members of a simulated society. May be taken for letter grade or pass/unsatisfactory. Pre- or corequisite: SOC 200.

203-2 SIMSOC II
Builds on experience of SIMSOC I and analyzes societal processes: small group interaction, stratification, leadership roles, political and economic philosophies, and minority relations. Students simulate a society and analyze experience. Graded pass/unsatisfactory. Prerequisite: SOC 202.

204-2 Sociology Career Seminar
Designed to help students think about their futures, become familiar with career options, relate theoretical work to practical concerns, and plan their course work with an awareness of postgraduate needs.

210-3 Courtship and Marriage Analysis
Analysis of family behavior in the United States stressing courtship, preparation for marriage, developmental tasks in marriage, child rearing, and marital tension.

221-3 Exploring Social Issues
Focuses on specific social problems. Topics vary.

231-3 Violence
Defines violence, explores patterns at individual and group levels, and examines explanations for change in quantity and intensity. Areas covered include criminal violence, domestic violence, rape, homicide, and genocide.

301-4 History of Sociological Theory
Historical study of the emergence and development of sociological thought from Adam Ferguson and Montesquieu through the 19th century; emphasis on the basic writings of Comte, Spencer, Marx, and others.

303-4 Contemporary Sociological Theory
Analyzes contemporary sociological theory (structural functionalism, symbolic interactionism, critical theory, and phenomenological theory) with a focus on the interpretation of society and on major figures of the 20th century.

306-4 Introduction to Research Methods
Philosophical and applied issues of sociological investigation. Various means of collecting sociological data are analyzed. Prerequisite: SOC 200 or 201.

310-4 Sociology of Gender
Introduces the theoretical and conceptual underpinnings of women's studies through exploring the changing historical, cultural, and social expressions of gender. Also examines social roles, institutions, policies, and movements which affect women.

313-1 Intensive Alcohol Education Program
Students are observer/participants in the intensive alcohol education program which presents individuals with factual materials about the effect of substance abuse, both physically and socially, so that they can make knowledgeable decisions about their usage. Graded pass/unsatisfactory.

315-3 Drug and Alcohol Intervention Workshop
Participant observation of the intervention and treatment of drug and alcohol problems including therapy and counseling groups, client/therapist contact, and professionals practicing intervention and confrontation techniques. May be taken for letter grade or pass/unsatisfactory. Prerequisite: (one of the following) CNL 461; PSY 311, 331; RHB 301, 407; SW 270, 481, 482, 483; SOC 320, 461; premedical concentration; prenursing concentration; or permission of instructor.

320-4 Sociology of Deviant Behavior
Extensive exploration of the various sociological approaches to the study of deviance and social disorganization with an emphasis on contemporary sociological theory and research. Prerequisite: SOC 200 or 201.

330-4 Criminology
Survey of crime, some causal theories, and attempts at crime prevention in the United States. Prerequisite: SOC 200 or 201.
332-4 Juvenile Delinquency
Problems of definition and treatment of delinquency. Preparation for further study and work with delinquents.

340-4 Social Organization
Theories and analysis of social organization in its historical and present context. Emphasis on the interrelationship between individuals, the family, and other institutions.

341-4 Social Inequality
Structures, theories, and consequences of social inequality with special emphasis on the United States.

342-4 The Demography of Human Populations
Introduction to factors influencing the structure and growth of human populations and the social consequences of population change. Patterns of fertility, mortality, and migration in today's societies are emphasized, and methods and materials used to study populations are presented.

345-4 Social Change
Explanations of social change in modern societies. Emphasis on identification of sources of change, effects of change throughout society, major trends, and issues for the future.

350-4 Sociology of Work
Investigation, analysis, and discussion of contemporary theories focusing on the relationship of the individual to work. Prerequisite: SOC 200 or 201.

360-4 Sociology of Family
Sociological analysis of family development over its life cycle. Involved is the relationship of the family to society and the individual. Topics include courtship, marriage, parenthood, adulthood, and aging. Prerequisite: SOC 200 or 201.

361-4 Religion and Society
(Also listed as REL 361.) General treatment of religion as a social institution examining the influence of religious ideas and organizations on other social institutions, and the influence of society on religion.

363-4 Sociology of Education
School as a social institution. Internal and external influences, structure of the school social system, and sociological issues affecting the school such as social class factors and equality of educational opportunity.

380-4 Individual and Society
Interaction between society and the individual, forms and content of social relationships, and socialization as a social process. Emphasis on the basic writings of G. H. Mead and others.

390-2 to 4 Directed Readings in Sociology
Readings in areas of specialized interest. May be taken for letter grade or pass/unsatisfactory.

399-1 to 4 Studies in Selected Subjects
Problems, approaches, and topics in the field of sociology. Topics vary.

406-4 Applications of Research Methods
Advanced course in social research techniques that provides students the opportunity to design and carry out a full-scale research project within a seminar-like class setting. Students are encouraged to select research problems related to their major interest areas. Prerequisite: SOC 300.

420-4 Sociology of Sexual Behavior
Course examines alternative sexual lifestyles and behaviors. Employing the concepts of cultural relativism and ethnocentrism, students learn how sexual relationships are perceived and responded to in contemporary American society. Prerequisite: SOC 200.

432-4 Penology
Historical development and critical assessment of penal institutions. Field visits to selected institutions. Prerequisite: SOC 330 or 332 or permission of instructor.

433-4 Internship in Corrections and Family
Supervised field experience in corrections and family agencies (probation, parole, jail, juvenile, adult, and aging). Requires readings, a log, progress reports, and a paper synthesizing readings and field experience.

439-4 Selected Topics in Problems/Deviance
Topics vary. Prerequisite: SOC 200 or 201.

440-4 Bureaucracy and Bureaucrats
Examination of the nature of modern bureaucratic organizations, their place in society, and consequences of bureaucratic forms for their members and society.

441-4 Industrial Sociology
Cross-cultural analysis of industrialization; organization of relationships within industrial social groups.

442-4 Race and Minority Relationships
Study of intergroup, racial, and ethnic group relations including the processes and consequences of conflict, prejudice, and discrimination.

443-4 South Africa and Apartheid
An introduction to the social history of South Africa and the system of apartheid. Considers several scenarios regarding the future of South Africa and invites reflection upon past and future U.S. involvement in that country. Prerequisite: SOC 200.

444-4 Urban Sociology
Deals with the role of cities in past and present societies, the social and cultural implications of urban living, and special problems associated with city life. Prerequisite: SOC 200 or 201.
446-4 Neighbors and Communities
What part do the community and the neighborhood play in the social life of modern societies? What makes a good neighborhood, a good community? These and other questions are addressed.

460-4 Neighbors and Communities
This class examines Black Feminism/Womanist Identity from a historical and contemporary perspective and highlights changes within the African American family. Seminar format will be utilized for students to discuss class readings. Prerequisite: SOC 410 and SOC 442.

461-4 Medical Sociology
Social dimension of health and illness. Consideration of the patterns of disease, along with the organization, provision, and delivery of medical services.

462-4 Social Gerontology
(Also listed as SW 462.) Study of social aspects of aging, the needs of the aging population, and society's response to these needs.

463-4 Social Gerontology II
Continuation of social gerontology. Explores in-depth concepts and issues related to aging. Prerequisite: SOC 462 or permission of instructor.

489-4 Selected Topics in Social Interaction
Titles vary.

490-2 to 4 Independent Research in Sociology
Field project in an area of interest. May be taken for letter grade or pass/unsatisfactory.

Spanish/SPN
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

101-4 First-Year Spanish
Study of the vocabulary and structure of the Spanish language; practice in conversation, reading, and writing.

102-4 First-Year Spanish
Study of the vocabulary and structure of the Spanish language; practice in conversation, reading, and writing.

103-4 First-Year Spanish
Study of the vocabulary and structure of the Spanish language; practice in conversation, reading, and writing.

111-4 Essentials of Spanish
Introduction to Spanish with an emphasis on speaking the language.

150-4 Spanish Grammar Review
A thorough review of Spanish grammar with an emphasis on oral practice.

201-4 Second-Year Spanish
Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. Prerequisite: SPN 103 or equivalent.

202-4 Second-Year Spanish
Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. Prerequisite: SPN 201 or equivalent.

203-4 Second-Year Spanish
Grammar review, reading, and discussion of selected texts with practice in speaking and writing the language. Prerequisite: SPN 202 or equivalent.

311-4 Spanish Conversation
Practice in oral use of Spanish emphasizing the culture of the Hispanic world. Prerequisite: SPN 203 or equivalent.

312-4 Spanish Conversation
Practice in oral use of Spanish emphasizing the culture of the Hispanic world. Prerequisite: SPN 203 or equivalent.

321-4 Spanish Composition
Oral and written composition in Spanish; translations from English into Spanish. Prerequisite: SPN 203 or equivalent.

322-4 Spanish Composition
Oral and written composition in Spanish; translations from English into Spanish. Prerequisite: SPN 203 or equivalent.

323-4 Spanish Composition
Oral and written composition in Spanish; translations from English into Spanish. Further grammar study. Prerequisite: SPN 203 or equivalent.

331-4 Survey of Spanish Literature
Historical survey of Spanish literature. From the beginning to romanticism. Prerequisite: SPN 312 and 322 or permission of instructor.

332-4 Survey of Spanish Literature
Historical survey of Spanish literature. From romanticism to the present. Prerequisite: SPN 312 and 322 or permission of instructor.

335-4 Business Spanish
An introduction to the language of business Spanish with insight into Spain and Latin America within the global economy. Prerequisite: SPN 203.

333-4 Survey of Spanish-American Literature
Reading of prose, poetry, and plays by Spanish-American writers. From pre-Columbian times to romanticism. Prerequisite: SPN 312 and 322 or permission of instructor.

334-4 Survey of Spanish-American Literature
Reading of prose, poetry, and plays by Spanish-American writers. From romanticism to the present. Prerequisite: SPN 312 and 322 or permission of instructor.
361-2 Spanish Phonetics
Study of the vowel and consonant sound system through phonetic method; intonation. Prerequisite: SPN 312 and 322 or permission of instructor.

SPN 312, 322, 332, and 334 or permission of instructor are prerequisites for the following advanced courses:

381-1 Applied Elementary Spanish Instruction
Spanish majors assist elementary course instructors in conducting classes. For Spanish majors only.

382-1 Applied Elementary Spanish Instruction
Spanish majors assist elementary course instructors in conducting classes. For Spanish majors only.

383-1 Applied Elementary Spanish Instruction
Spanish majors assist elementary course instructors in conducting classes. For Spanish majors only.

399-1 to 4 Studies in Selected Subjects
Study of the vowel and consonant sound system through phonetic method; intonation. Prerequisite: Spanish majors assist elementary course instructors in conducting classes. For Spanish majors only.

401-4 Golden Age Drama
Intensive study of the works of Cervantes including Don Quixote, novelas ejemplares, entremeses, and longer dramatic works. Lectures, discussions, and oral reports on Cervantes and his time.

402-4 Modern Drama
Intensive study of the works of Cervantes including Don Quixote, novelas ejemplares, entremeses, and longer dramatic works. Lectures, discussions, and oral reports on Cervantes and his time.

411-4 Seminar in Spanish Literature
Intensive study of selected topics in peninsular literature. Background lectures, oral reports, and discussions. Topics vary.

412-4 Seminar in Spanish-American Literature
Intensive study of selected topics in Spanish-American literature. Background lectures, oral reports, and discussions. Topics vary.

414-4 Contemporary Spanish Literature
Readings in the novel, poetry, and drama of major Spanish writers in the post-Civil War period.

441-4 Contemporary Latin-American Literature
Readings in the novels, poetry, and drama of various Latin-American writers from the late 1930s to the present.

450-1 to 4 Undergraduate Research in Spanish
Topics vary.

462-4 The Generation of 1898
Novel, poetry, and theatre of Unamuno, Barojas, and others.

481-4, 482-4 Independent Reading for the Advanced Student
Topics vary.

Statistics/STT
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

160-5 Statistical Concepts
A nontechnical introduction to fundamental ideas in statistics. Statistical ideas are introduced through examples, showing how statistics has helped solve major problems in various fields. Prerequisite: MTH 126 or 127 or equivalent or at least level four on math placement test.

264-4 Elementary Statistics I
Numerical and graphical methods for finding and summarizing important features of data. Principles of designing experiments for collecting data. Introduction to probability. Use of statistical computing package to apply methods and illustrate concepts. Prerequisite: MTH 126 or 127 or equivalent or at least level four on math placement test.

265-4 Elementary Statistics II
Confidence intervals and hypothesis testing introduction. Applications to means, proportions, two-sample comparisons, contingency tables, linear regression, and analysis of variance. Use of statistical computing package to apply methods to data sets. Prerequisite: STT 264.

342-4 Probability and Statistics for Middle School Teachers
360-4 Applied Statistics I
Introduction to probability, random variables, and their expectations, some commonly used discrete and continuous distributions, concept of random sampling and sampling distributions. Use of computer software packages for simulating, summarizing, and displaying data. Prerequisite: MTH 229 and 230, or equivalent.

361-4 Applied Statistics II
Introduction to statistics, standard statistical methods for estimation of parameters and hypothesis testing, introduction to regression analysis and analysis of variance techniques, exposure to data analysis using packaged computer programs. For 360, completion of two calculus courses; For 361, STT 360.

363-3 Engineering Statistics
Introduction to probability, distributions, and statistical methods; using calculus to develop the necessary theory. Prerequisite: MTH 232.

367-2 Introduction to SAS
Introduction to the use of the statistical analysis system, a statistical computing package widely used in industry, government, and academia. Prerequisite: STT 265 or equivalent.

386-1 to 5 Independent Reading in Statistics and Probability
Topics vary.

396-1 to 5 Topics in Statistics and Probability
Titles vary. May be taken for letter grade or pass/unsatisfactory.

401-4 Nonparametric Methods
Distribution-free estimation and hypothesis testing procedures. Includes methods for use in one- and two-sample location and dispersion problems, nonparametric alternatives to ANOVA and regression, goodness-of-fit tests, measures of association, and tests for randomness. Prerequisite: STT 460 or equivalent.

411-4 Applied Time Series
Stochastic models for discrete time series in the time-domain, moving average processes, autoregressive processes, model identification, parameter estimation, and forecasting. Statistical computing software packages are used. Prerequisite: STT 361 (561) or permission of instructor.

412-3.5 Environmental Chemistry III: Solids
Survey of problems of solid wastes, pesticides, food additives, and radioactive materials, including their chemical composition, effects, detection, disposal, and natural breakdown. Three hours lecture, one hour lab or field project. Prerequisite: CHM 213, 312; or corequisite CHM 416.

424-4 Statistical Quality Control and Improvement
Statistical process control for attributes and variables data: probability distributions, sampling plans, control charts, statistical control, process capability, process improvement, tolerance intervals, evolutionary operation, and applications. Prerequisite: STT 361 or 363 or permission of instructor.

426-4 Reliability and Life Data
Presentation of important models and methods, and analysis of lifetime and survival data. Prerequisite: STT 361 or equivalent.

428-4 Queuing Theory
Stochastic concept of a queuing process is developed. Theories and applications of single and many server queues are presented. Emphasis on applications in engineering and computer science. Prerequisite: STT 360 or 362 or equivalent.

430-4 Environmental Statistics
The statistical methods suitable for the collection, analysis, and the interpretation of the temporal and spatial data arising in environmental studies are discussed. Computer packages for the data analysis are introduced. Prerequisite: STT 265 or equivalent or instructor’s permission.

461-4 Theory of Statistics I
Probability models, density and distribution functions, expectation, marginal and conditional distributions, stochastic independence, moment generating functions, central limit theorem, decision theory, and estimation of parameters. Prerequisite: STT 360, MTH 232, or permission of instructor.

462-4 Theory of Statistics II
Hypothesis testing, linear model, and nonparametric methods. Prerequisite: STT 361 or 461; or permission of instructor.

464-4 Biostatistics
Classical statistical techniques for analysis and interpretation of research data with emphasis on biomedical applications. Includes descriptive statistics, distributions, experimental design, ANOVA, regression, correlation, contingency table analysis, and nonparametric procedures.

466-4 Statistical Methods I
Classical statistical techniques for analysis and interpretation of research data with emphasis on the use of packaged computer routines and the use of linear models. Includes basic probability and statistics review, simple, multiple, and polynomial regression; indicator variables in regression; and multiple and partial correlation. Nonparametric methods; analysis of categorical data; and exploratory data analysis. Prerequisite: MTH 253 or 355, STT 265 or 361 or equivalent.
467-4 Statistical Methods II
Continuation of STT 466. Includes analysis of variance, multiple comparisons, factorial experiments, analysis of covariance, and randomized block designs. Exploratory data analysis. Prerequisite: STT 466.

469-4 Introduction to Experimental Design
Techniques of blocking, randomization, replication, and factorial design. Topics include complete and incomplete block designs, confounding, fractional factorial designs, split-plots, response surface methods, parameter design, and hierarchical designs. Statistical software used extensively. Prerequisite: STT 467 or permission of instructor.

486-1 to 5 Independent Reading in Statistics and Probability

492-3 Undergraduate Statistics Seminar
Detailed study of a single statistical topic or problem in practice of statistics chosen by student with approval of the instructor. The student will present the results of study in an expository paper. Seminars/Independent study. Limited to 10 students. Mathematics majors with statistics option only.

496-1 to 5 Topics in Statistics and Probability

---

Theatre/TH

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

See Motion Pictures/MP and Dance/DAN for additional course listings.

100-1 Musical Theatre Voice
Half-hour musical theatre voice lessons per week for theatre majors only.

102-3 Introduction to Technical Theatre
General survey of technical aspects of theatre including its personnel and organization.

103-2 Vocal Production and IPA for the Actor
For acting majors only. Application of the International Phonetic Alphabet and understanding the physiological structure of the vocal mechanism.

104-1 IPA for the Singing Actor
Basic training in the International Phonetic Alphabet for musical theatre acting majors.

105-1 Vocal Production and IPA
Departmental majors only. Basics of singing and application of International Phonetic Alphabet.

106-3 Basic Music Theory and Piano Skills for Actors I
Introduces basics of rhythm, melody, sight-singing, and musical theatre piano in a group class.

107-3 Basic Music Theory and Piano Skills for Actors II
Second term of course covering basics of rhythm, melody, sight-singing, and musical theatre piano in a group class.

108-3 Basic Music Theory and Piano Skills for Actors II
Third term of course covering basics of rhythm, melody, sight-singing, and musical theatre piano in a group class.

110-1 to 3 Theatre Management Activities
Participation in university theatre productions: specific assignments determined at initial meeting.

115-1 Singing for the Actor I
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class.

116-1 Singing for the Actor I
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class. Prerequisite: TH 115.

117-1 Singing for the Actor I
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class. Prerequisite: TH 116.

120-2 Makeup for the Theatre
Theory and practice of stage makeup. Prerequisite: TH 102.

124-2 Theatre Graphics I: Fundamentals
Drawing for the theatrical designer with emphasis on fundamentals.

125-2 Theatre Graphics I: Media
Drawing for the theatrical designer with emphasis on media. Prerequisite: TH 124 or permission of instructor.

126-2 Theatre Graphics I: Concepts
Drawing for the theatrical designer with emphasis on concepts. Prerequisite: TH 125 or permission of instructor.

141-1 Acting Warmup
Physical and vocal training for freshmen acting majors. Graded pass/unsatisfactory.

142-1 Acting Warmup

143-1 Acting Warmup
Physical and vocal training for freshmen acting majors. Third term. Graded pass/unsatisfactory.

144-3 Acting I
Training imagination, mind, body, and voice of the beginning actor.
145-3 Acting I
Training imagination, mind, body, and voice of the beginning actor.

146-3 Acting II
Training imagination, mind, body, and voice of the beginning actor.

147-2 Acting Aesthetics
Generalized acting course that includes various aspects of movement, vocal technique, improvisation, and scene work. Designed for students who are emphasizing the technical areas of the arts. For technical design majors only.

148-2 Acting Aesthetics
Generalized acting course that includes various aspects of movement, vocal technique, improvisation, and scene work. Designed for students who are emphasizing the technical areas of the arts. For technical design majors only. Prerequisite: TH 147.

157-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

158-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre majors.

159-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

200-2 Rehearsal and Performance
Student actors are directed by faculty in mainstage or studio theatre productions. May be repeated up to eight credits. Departmental permission and audition required.

210-3 Theatre Technology
Participation in the operation of a production shop. Introduces students to the fundamentals of theatre technology, emphasizing basic processes and materials. Participation in selected department productions required. For B.F.A. technology majors only.

214-3 The Theatre in Western Culture
Introduction to the many arts of the theatre including the roles of the actor, playwright, director, designer, critic, and audience. Selected scripts from representative historical periods are examined as an aid in understanding the theatrical event.

215-1 Singing for the Actor II
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class. Prerequisite: TH 117.

216-1 Singing for the Actor II
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class. Prerequisite: TH 215.

217-1 Singing for the Actor II
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class. Prerequisite: TH 216.

220-3 Stagecraft
Introduction to theory and practice of theatre technology with study of the materials and techniques involved. Includes practice in construction, mounting, and running of productions.

222-2 Theatre Production
Practical study of technical theatre technology with study of the materials and techniques involved. Includes practice in construction, mounting, and running of productions. May be repeated for a maximum of nine credit hours applicable toward degree.

224-3 Theatre Graphics II: Drafting
Introduction to and practice with the basic graphics tools, materials, and techniques used in drafting designs for the theatre.

225-3 Theatre Graphics II: Color
Introduction to and practice with the basic color theories, materials, and techniques used in designing for the theatre.

226-3 Theatre Graphics II: Model Making
Introduction to and practice with the basic tools, materials, and techniques of scale model building for the theatre.

227-3 Stage Lighting Technology
In-depth study of scenery technology and its techniques. Includes the study of standard scenery construction, metalworking, and the application and details of stage rigging and its equipment. For B.F.A. technology majors only. Prerequisite: TH 220.

229-3 Costume Technology
Introduction to the basics of theatre costume technology. Includes fundamentals of construction, aging, dyeing, and distressing of costumes.

240-2 Movement for the Actor I
Study of physical alignment, improvisation, warm-up methods, and exploration of movement dynamics as they relate to acting. Basic tumbling and pantomime techniques are introduced. For sophomore acting majors only.
241-2 Movement for the Actor I
Study of physical alignment, improvisation, warm-up methods, and exploration of movement dynamics as they relate to acting. Basic tumbling and pantomime techniques are introduced. For sophomore acting majors only.

242-2 Movement for the Actor II
Study of physical alignment, improvisation, warm-up methods, and exploration of movement dynamics as they relate to acting. Basic tumbling and pantomime techniques are introduced. For sophomore acting majors only.

244-3 Acting II
Second year of acting emphasizes character study. Emphasis on audition at the end of spring quarter. Prerequisite: TH 146.

253-3 Acting II
Second year of acting emphasizes character study. Emphasis on audition at the end of spring quarter. Prerequisite: TH 146.

254-2 Theatre Speech I
Second year of speech focusing on expansion and strengthening of the actor's voice. Emphasis on clear articulation and proper enunciation of phonemes of American standard English. Corequisite: TH 244.

255-2 Theatre Speech I

256-2 Theatre Speech I

257-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

258-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

259-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

301-3 Introduction to Theatrical Design
Exploration of the collaborative process between director and designers, which results in a specific visual approach to a production. Emphasis on designer progression from script analysis and research to realization of the design. Prerequisite: TH 214 or permission of instructor.

304-4 Dramatic Writing
(Also listed as ENG 304.) Theory and practice of techniques of dramatic writing emphasizing writing of original plays. Prerequisite: ENG 101, 102, or permission of instructor.

310-1 to 3 Theatre Arts Management Practicum
Participation in university theatre arts management activities. Specific assignments determined at initial meeting.

315-1 Singing for the Actor III
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class. Prerequisite: TH 217.

316-1 Singing for the Actor III
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class. Prerequisite: TH 315.

320-6 Applied Theatre Technology I
Practical study in technical execution. Emphasis on daily operation of theatre production facilities and shops. Participation in all major department productions required. For B.F.A. design/technology majors only. Prerequisite: completion of 18 credit hours of TH 210, TH 227, 228, 229, and permission of instructor.

321-3 Scene Painting I
Introduction to the materials and techniques used in traditional scenic painting, from basic skills (including graining, spattering, wet-blending) to the manipulation of light, shadow, and texture to create three-dimensional effects. Prerequisite: TH 225 or permission of instructor.

322-3 Scene Painting II
Further development of the skills taught in Scene Painting I, with emphasis on rendering volume, light, and realistic surface texture. Includes working portraiture, foliage, and rendering of draped fabric. Prerequisite: TH 321 or permission of instructor.

323-3 Scene Painting III
Continued work in trompe l'oeil techniques, emphasizing ability to reproduce accurately from source material. Introduction to the use of applied textures and painting transparencies. Prerequisite: TH 322 or permission of instructor.

324-3 Lighting Design
Study of lighting design and the behavior of light as an expressive medium of theatrical design. Includes project work with an emphasis on professional technique.
325-3 Set Design
Study of scenic design and the dynamics of stage space use. Includes project design work with an emphasis on professional technique and period design.

326-3 Costume Design
Study of costume design for the theatre. Includes project design work with an emphasis on professional technique and period design.

328-3 Decorative Style through the Ages
Development of dominant characteristics of the history of architecture, furniture, and ornamental design and how they relate to abstract elements of taste, design, composition, and color.

329-3 Clothing Style through the Ages
Costume and fashion from prehistoric to modern times. Overview of the history of costume and fashion and how it relates to theatre.

337-3 Musical Theatre Performance
Scene study class designed to integrate acting training with music and dance skills using major texts from musical theatre.

338-3 Musical Theatre Performance
Scene study class designed to integrate acting training with music and dance skills using major texts from musical theatre.

339-3 Musical Theatre Performance
Scene study class designed to integrate acting training with music and dance skills using major texts from musical theatre.

340-2 Movement for the Actor II
Basic movement skills such as period movement, dancing, and stage combat as they relate to performing; designed to give the performer total perception and to discover the physical and psychological stimulus for movement. For studio acting majors only. Prerequisite: TH 246.

341-2 Movement for the Actor II
Basic movement skills such as period movement, dancing, and stage combat as they relate to performing; designed to give the performer total perception and to discover the physical and psychological stimulus for movement. For studio acting majors only. Prerequisite: TH 246.

342-2 Movement for the Actor II
Basic movement skills such as period movement, dancing, and stage combat as they relate to performing; designed to give the performer total perception and to discover the physical and psychological stimulus for movement. For studio acting majors only. Prerequisite: TH 246.

343 Acting III
First year of Professional Actor Training program. Must be taken in sequence. All students must receive a grade of “C” or better to continue in sequence. Prerequisite: TH 246.

345-3 Acting III
First year of Professional Actor Training program. Must be taken in sequence. All students must receive a grade of “C” or better to continue in sequence. Prerequisite: TH 246.

346-3 Acting III
First year of Professional Actor Training program. Must be taken in sequence. All students must receive a grade of “C” or better to continue in sequence. Prerequisite: TH 246.

347-3 One Person Show
Provides a foundation for the senior thesis project. Elements necessary in the development of a one person show will be taught, concluding in a solo performance. Prerequisite: must complete all sophomore and junior major courses up to this point.

350-4 Directing
Problems of script selection and interpretation, casting, rehearsing, and performance. Techniques of composition and movement; the proscenium stage and open stage. Preparation of the prompt book. Prerequisite: TH 214.

351-3 Stage Management
This course develops the skills required of the working stage manager. Through lecture, discussion, and application, students work problems of stage management through to practical solutions. Department permission required. Prerequisite: TH 214.

352-2 Directing Laboratory
Presentation of a one-act play in the studio theatre for departmental and public audiences. Prerequisite: TH 350.

354-2 Theatre Speech II
Speech for the classical stage. Emphasis on unique demands of communication of dramatic verse text through exploration of Shakespeare, Molière, and Restoration playwrights. Particular attention given to diction or the art of emphasis to illuminate poetic language. Prerequisite: TH 256. Corequisite: TH 344.

355-2 Theatre Speech II
Speech for the classical stage. Emphasis on unique demands of communication of dramatic verse text through exploration of Shakespeare, Molière, and Restoration playwrights. Particular attention given to diction or the art of emphasis to illuminate poetic language. Prerequisite: TH 354. Corequisite: TH 345.

356-2 Theatre Speech II
Speech for the classical stage. Emphasis on unique demands of communication of dramatic verse text through exploration of Shakespeare, Molière, and Restoration playwrights. Particular attention given to diction or the art of emphasis to illuminate poetic language. Prerequisite: TH 355. Corequisite: TH 346.
357-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

358-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

359-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

360-3 The History of the Theatre I
Survey of the history and development of theatrical production from the Greeks through the renaissance and including primitive forms both ancient and contemporary. Emphasis on the history of play production rather than on literature.

361-3 The History of the Theatre II
Survey of the history and development of theatrical production from the 17th century through the present day. Emphasis on the history of play production.

366-3 Theatre Repertoire II
Special problems of analysis, acting, and staging plays from various periods of theatre history are explored from a production point of view. From Aeschylus to Jonson.

367-3 Theatre Repertoire II
Special problems of analysis, acting, and staging plays from various periods of theatre history are explored from a production point of view. From Beaumont to Chekhov.

368-3 Theatre Repertoire III
Special problems of analysis, acting, and staging plays from various periods of theatre history are explored from a production point of view. From Shaw to Albee.

370-3 Creative Dramatics
Study of the nature of creativity in children and of the techniques that develop sensitivity, bodily freedom, characterization, and impression.

371-2 Musical Theatre Score and Libretto Analysis
Examines a variety of complete texts from the musical theatre to develop music and text analysis skills for acting, directing, or choreography.

372-2 Musical Theatre History and Literature
Survey of the history and literature of the musical theatre from opera and operetta through contemporary broadway productions. Examination of the various popular influences on the form. Includes viewing film and videotaped productions. Prerequisite: TH 371.

373-2 Musical Theatre History and Literature II
Survey of the history and literature of the musical theatre from opera and operetta through contemporary broadway productions. Examination of the various popular influences on the form. Includes viewing film and videotaped productions.

375-3 Theatre Management
Operational procedures for school, community, and professional theatre. Includes problems of organization, personnel, budgeting, purchasing, accounting, ticket sales, publicity, promotion, and house management.

390-2 to 4 Projects in Theatre
Advanced individual work.

399-1 to 4 Studies in Selected Subjects
Course of variable content dealing with problems, approaches, and topics in the field of theatre.

410-1 to 3 Stage Management Practicum
Participation in university theatre stage management activities. Specific assignments determined at initial meeting.

415-1 Singing for the Actor IV
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class. Prerequisite: TH 317.

416-1 Singing for the Actor IV
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class. Prerequisite: TH 415.

417-1 Singing for the Actor IV
For acting majors only. All students must have auditioned for and received departmental approval before registering for this class. Prerequisite: TH 416.

420-6 Applied Theatre Technology II
Intensive study of selected aspects of technical theatre. Titles vary. Prerequisite: completion of 18 credit hours of TH 320 required.

424-6 Advanced Design Studio
Intensive study of theatrical costumes, scenery, and lighting with a focus on script interpretation. Includes practical design work with an emphasis on produced designs, professional development, and specialization in the students' area of design.

425-6 Advanced Design Studio
Intensive study of theatrical costumes, scenery, and lighting with a focus on script interpretation. Includes practical design work with an emphasis on produced designs, professional development, and specialization in the students' area of design. Prerequisite: TH 424.

426-6 Advanced Design Studio
Intensive study of theatrical costumes, scenery, and lighting with a focus on script interpretation. Includes practical design work with an emphasis on produced designs, professional development, and specialization in the students' area of design. Prerequisite: TH 425.
427-3 Advanced Stagecraft
Advanced study of stagecraft practices including complex scenery layout, rigging, power drive systems, and materials. For B.F.A. design/technology majors only. Prerequisite: TH 220, 227, 229.

429-3 Advanced Theatre Crafts
Lecture/workshop class with variable topics including property and furniture building, scenic painting, welding, draping, etc. Topics vary.

438-3 Musical Theatre Thesis Rehearsal
Preparation of the musical theatre thesis including the technical and production needs for the special thesis production.

439-3 Musical Theatre Thesis
Performance(s) of specially created theatre piece utilizing all musical theatre emphasis majors. This performance may serve as a showcase for theatrical agents and professional casting personnel.

440-2 Movement for the Actor III
Visualizing techniques along with specific analysis of the ideas of LeCoq, Marceau, Alexander, Davis, and others. For B.F.A. studio acting majors only. Prerequisite: TH 342.

441-2 Movement for the Actor III
Visualizing techniques along with specific analysis of the ideas of LeCoq, Marceau, Alexander, Davis, and others. For B.F.A. studio acting majors only. Prerequisite: TH 440.

442-2 Movement for the Actor III
Visualizing techniques along with specific analysis of the ideas of LeCoq, Marceau, Alexander, Davis, and others. For B.F.A. studio acting majors only. Prerequisite: TH 441.

444-3 Acting IV
Second year of Professional Actor Training program. Prerequisite: TH 346.

445-3 Acting IV
Second year of Professional Actor Training program. Prerequisite: TH 346.

446-3 Acting IV
Second year of Professional Actor Training program. Prerequisite: TH 346.

447-3, 448-3 Acting Thesis Project
Intensive work on a final creative performance project. For senior acting studio majors only. Graded pass/unsatisfactory. Prerequisite: TH 444.

450-3 Studies in Directing
Provides intensive study of selected aspects of directing for the theatre. Titles vary.

451-3 Directing Thesis Project
Original directed research culminating in a creative performance project. For B.F.A. directing majors only. Prerequisite: TH 350.

452-3 Directing Thesis Project
Original directed research culminating in a creative performance project. For B.F.A. directing majors only. Prerequisite: TH 350.

454-2 Theatre Speech III
Thorough analysis and study of sounds of foreign dialects and regional accents. Students explore transformation of their own voices. Students also learn to vary their stage voices for age and character roles. Prerequisite: TH 356. Corequisite: TH 444.

455-2 Theatre Speech III
Thorough analysis and study of sounds of foreign dialects and regional accents. Students explore transformation of their own voices. Students also learn to vary their stage voices for age and character roles. Prerequisite: TH 454. Corequisite: TH 445.

456-2 Theatre Speech III
Thorough analysis and study of sounds of foreign dialects and regional accents. Students explore transformation of their own voices. Students also learn to vary their stage voices for age and character roles. Prerequisite: TH 455. Corequisite: TH 446.

457-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

458-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

459-2 Singing for the Musical Theatre Actor
Private singing lessons for musical theatre acting majors.

495-3 to 12 Workshop in Theatre
Intensive study of special topics or problems, or intensive experience in theatrical presentation according to particular needs of participants. Titles vary.

498-12 to 15 Professional Theatre Internship
Placement of superior upper-division B.F.A. theatre majors in various professional theatres as management or production interns. For B.F.A. theatre majors only.

University College/UVC

Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

100-1 College Study Strategies
Offers how-to advice on topics such as note taking, time management, preparing for exams, textbook skills, memory training, library usage, etc. Individual and group study/counseling offered as time permits. Graded pass/unsatisfactory. (Previously listed as UD 100.)
101-2 *Freshman Seminar: The University Experience*  
Interactive presentation and discussion of college student life and adjustment issues, academic strategies, academic requirements and information, organization of the university, and career development. (Previously listed as UD 101.)

102-1 *First Year Seminar*  
Continuation of UVC 101. Extends learning community participation. Uses students’ first quarter experience to further facilitate adjustments to college. Graded pass/unsatisfactory.

107-2 *Stress Management and Relaxation Techniques*  
Helps students learn how to manage stress better by using applications from cognitive psychology and experiential training in well established techniques. Graded pass/unsatisfactory.

110-2 *Returning to Learning*  
Recommended for the nontraditional student who is beginning or reentering to college after a long absence. Topics include time management, reading for content, note taking, test taking, test anxiety, stress management, and making learning fun. Graded pass/unsatisfactory.

---

**University Honors/UH**

*Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.*

101-1 to 4 *Directed Study*  
Faculty-directed research or reading.

201-3 to 4 *Studies in the Humanities*  
Explores the humanities comparatively, stressing similarities and differences in themes, methods, materials, theoretical constructs, and problems. Focuses on such topics as humanity and freedom or the city and the individual.

202-3 to 4 *Studies in the Social Sciences*  
Explores the social sciences comparatively, stressing similarities and differences in themes, methods, materials, theoretical constructs, and problems. Focuses on such topics as people and groups or institutions and bureaucracies.

203-4 *Studies in the Natural Sciences*  
Varying topics or issues in the natural sciences approached in an interdisciplinary framework. Course permits intensive coverage of subject matter while also focusing on the interrelationships of the natural scientific disciplines.

400-3 to 4 *University Honors Seminar*  
Emphasis on broadly interdisciplinary topics or issues. Topics vary.

---

**Urban Affairs/URS**

*Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.*

311-4 *Introduction to Urban Affairs*  
Interdisciplinary introduction to general field of urban affairs. Reviews idea of the city and meaning of urban life.

316-4 *American Urban History*  
Urban history in its broadest sense from the ancient world to the present, providing historical perspective to the contemporary urban–metropolitan phenomenon and exploring how and why urban civilization came to be.

317-4 *Urban Planning I: Introduction to Urban Planning*  
(Also listed as GEO 317.) Examination of the development of city planning as a professional discipline. Consideration of the contributions to planning by the arts and sciences. Selected activities and functions of contemporary urban planning agencies are viewed from the perspective of current urban problems.

318-4 *Urban Planning II: Principles of Planning*  
(Also listed as GEO 318.) Includes the role of planning in urban structures, and duties and responsibilities of planning commissions, process of preparing comprehensive plans; population change, the economic base, and determinants of future urban structure. Prerequisite: URS 317.

321-4 *City Politics*  
(Also listed as PLS 321.) Governments and politics of metropolitan regions, government structure and functions, and interest and power relations.

345-4 *Public Administration*  
(Also listed as PLS 345.) Nature and scope of public administration; administrative law; and public interest in the administrative process.

346-4 *Public Personnel Administration*  
(Also listed as PLS 346.) Methods of employment, training, compensation, and employee relations in various levels of civil service. Examines organizations of public employees.

399-4 *Studies in Selected Subjects*  
Problems, approaches, and topics in the field of urban affairs. Topics vary.

410-4 *Urban Empirical Research*  
Introduces students to research and data collection methods used to explore and explain urban issues. Preparation course for URS 411 and students interested in empirical research. Investigates what makes research useful, valid, and ethical. Requires evaluating and developing research designs.

411-4 *Seminar in Urban Affairs*  
Includes development of a major research paper and a bibliography in urban affairs. Prerequisite: URS 311 and 410.
412-4 Cities and Technology
Deals with the evolving relationship between technology and urban growth, physical form, government, and politics. Explores how "technological fixes" for complex urban problems have shaped urban development and politics.

414-4 Urban Fiscal Administration
Examines local fiscal institutions and introduces analytical tools for designing and evaluating fiscal policies. Reviews financial reporting and accounting, the municipal bond market, pension systems, state and local taxes, user charges, and intergovernmental relations.

415-4 Community Development I
Focuses on the importance, the profession, and the practice of community development. Introduces theories of community development and studies current neighborhood programs and policies.

416-4 Community Development II
Examines three fundamental organizing strategies—self-help, technical assistance, and conflict—which are used to improve a community's quality of life. The course combines classroom learning and field observation. Prerequisite: URS 415 is recommended, but not required.

417-4 Public Sector Labor Relations
Examines collective bargaining, the negotiation process, impasse resolution, and contract and grievance administration in local government.

420-4 Public Safety Administration
Policing, corrections, fire, emergency medical services, and emergency management systems will be examined to provide an understanding of the services offered, technologies used, problems faced, and alternatives available in each of the areas.

423-4 Issues in Urban Administration
Explores issues and topics related to the administration of urban nonprofit organizations, community development agencies, and local governments. Titles vary.

424-4 Issues in Urban Planning
Examines various issues related to planning urban environments. Topics may include housing, funding nonprofit organizations, strategic planning, and economic development action plans.

425-4 Issues in Urban Development
Explores issues that impact urban development such as housing, pollution, and privatization. Emphasizes an approach for understanding the issues and formulating effective responses.

427-4 Urban Policy Analysis
(Also listed as PLS 427.) Study of the policy development process and its relationship to past and current urban issues. The course focuses on a current urban issue through discussion, reading, and research.

446-4 Public Budgeting
(Also listed as PLS 446.) Examination of the major phase of the governmental budget cycle, types of budget, budgetary reform, economic and public impact of government budgeting, decision-making process, and legislative/executive relations in budget formation and implementation.

450-4 Ethics in Public Service
Systematic development of ethics in public service, including individual roles and obligations, values, standards, and codes of conduct.

470-4 Urban Leadership
Examines the leadership role of the urban administrator in formulating programs, policies, and service delivery options. Explores topics such as managing the internal and external environments, improving productivity and effectiveness, and policy/program creation.

475-4 Management of Urban Nonprofit Agencies
Examines the organizational and managerial foundations of nonprofit organizations. Areas such as the nature and mission of nonprofit organizations, evaluating performance, resource development/fund-raising, and managing volunteers are explored.

490-1 to 4 Special Topics
Advanced study in selected topics in urban studies. Topics may include new developments in methodology or the various subfields of the discipline.

492-4 Urban Affairs Internship
Senior-level internship in which students work in the offices of a local public agency.

Vocational Education/VOE
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

401-1 to 4 Business and Marketing Education Practicum
Designed to give the student valuable work experience in an actual marketing environment while being supervised/directed by a business or marketing educator. Graded pass/unsatisfactory.

402-4 Field Experience I
Students will be observing the 29 competencies required by the Division of Vocational and Career Education in a vocational laboratory setting. Prerequisite: VOE 460.

403-4 Field Experience II
Students will be observing the 29 competencies required by the Division of Vocational and Career Education in vocationally related classes. Prerequisite: VOE 402.
404-1 Field Experience III
Students will be observing the 29 competencies required by the Division of Vocational and Career Education in applied academic classes. Prerequisite: VOE 403, 461.

405-1 Field Experience IV
Students will be observing the 29 competencies required by the Division of Vocational and Career Education and will be placed in vocationally funded employability and entrepreneurship classes. Prerequisite: VOE 404, 462.

406-3 Survey of Workforce Education
An overview of the instructional programs in workforce education and their administration at the national, state, and local levels. Current legislation, school-to-work initiatives, tech prep, and trends affecting workforce programs are addressed and explored.

407-3 Workforce Education: Methods and Strategies in Transition to Work
The selection, implementation, and evaluation of school-to-work transition models in organizing and managing work and community-based education programs. Topics include career information resources, curriculum materials, and trends influencing work and careers.

408-3 Intensive Business Education
Qualifying course for vocational intensive business education programs. Comprehensive study in developing procedures and principles in program construction, selection, improvement, implementation, and development of program guidelines. Prerequisite: EDT 433 or equivalent.

410-3 Laws and Regulations for Vocational Education
An analysis and discussion of the federal and state laws as they affect the local school agency in operating vocational education programs.

411-3 Workforce Classroom/Laboratory Management
Discusses strategies for selection and arrangement of learning activities in the classroom and laboratory setting, procedures for safety, handling and storage of materials and supplies, student personnel systems, records and reports, maintenance of equipment, rotation of assignments, and student evaluation.

412-3 School-Community Relations
A study of the role of the vocational school in the community including vocational school publics, theories of community power structure, and the vocational school with emphasis on methods of communication.

413-3 Introduction to Cooperative Education
Designed to present the basic fundamentals of establishing and operating a cooperative program following state and federal guidelines for work/study students.

414-1 to 3 Teaching in a Cooperative Education Program I
A study of the methods used in the operation of programs that are vocationally cooperative, including the coordination of classroom related instruction with on-the-job experience. Includes the development and use of a variety of individualized methods of instruction as well as group procedures. Prerequisite: VOE 413.

415-1 to 3 Teaching in a Cooperative Education Program II
A study of the methods used in the operation of programs that are vocationally cooperative, including the coordination of classroom related instruction with on-the-job experience. Includes the development and use of a variety of individualized methods for at-risk students who are academically, economically, or socially disadvantaged. Prerequisite: VOE 414.

416-1 to 3 Teaching in a Cooperative Education Program III
A study of the methods used in the operation of programs that are vocationally cooperative, including the coordination of classroom related instruction with on-the-job experience. Includes the development of a course of study and curriculum guide appropriate for work study students. Prerequisite: VOE 415.

417-1 to 8 Update Occupational Skills and Knowledge
Provides the opportunity for the student to upgrade occupational proficiency and technical knowledge through business or industrial experiences or supplemental training for the purpose of improving instruction.

418-3 Historical and Philosophical Foundations of Vocational Education
Provides an introduction to the historical and philosophical antecedents to the present day vocational and technical education. It examines social influences which have affected legislation which supports vocational and technical education. Basic principles are introduced. Current trends and issues in vocational, technical, and career education are examined.

419-2 to 4 Internship in Teaching Vocational Education
A review of teaching methods, observation of practicing teachers planning, and presentation skills. This course will provide the practicing teacher the opportunity to update curriculum and teaching skills. Students already employed as vocational teachers must have all other four-year provisional certification requirements completed.
421-3 Classroom Management in Workforce Education
Current practice and innovation in the study of discipline models and their application in the classroom. Topics include the legal implications of classroom management.

422-3 Supervision of Vocational Education
Development of supervisory skills in vocational education. Stresses human relations, basic management, and leadership skills in program inauguration and operations.

423-3 Practicum for the Development of Teacher Leaders
Observation, supervised leadership, and administrative experiences will be offered in a variety of appropriate settings. Students will be assigned to work as interns in a school setting under the joint supervision of school and university personnel.

425-3 Organization and Administration for Vocational Education
Study of the organization of vocational education at the national, state, and local levels exploring the relationships existing between the various agencies. This course is a core requirement for a baccalaureate degree in vocational education.

426-3 Adult Vocational Education
An investigation of vocational education programs for adults, including the curriculum, special methods, and the development of curriculum materials suitable to such programs.

431-3 Evaluation of Student Performance in Workforce Education
Evaluation of student learning and performance including forms of measurement and interpretation of data.

451-3 Introduction into Workforce Education
Provides students with a foundation for teaching workforce education competencies, philosophy, and instructional organization. Development of integrated workforce instructional plans is a major emphasis. Prerequisite: VOE 471.

452-3 Workforce Teacher Performance Assessment
A program of teacher assessment using three assessment methods, direct observation of classroom practice, review of written documentation prepared by the teacher, and semi-structured interviews before and after the observation. Prerequisite: VOE 471, 451, 421, 431, 472, 473, 474, 475, 469, 458, 411.

455-3 Laboratory Safety and Accident Prevention for Vocational Teachers
To develop an awareness of safety as well as the prevention of accidents in industrial shops and laboratories. Prerequisite: trade and industrial majors or permission of instructor.

456-3 Vocational Student Organizations
An analysis of vocational youth organizations with emphasis on planning and conducting such programs.

458-3 Selection and Organization of Workforce Curriculum
Provides workforce educators the competencies necessary to identify, select, and organize curricular models and resources to develop a program course of study.

459-3 Developing Competency-Based Curriculum Materials
Provides the vocational teacher with skills to develop individualized competency-based education from new or previously developed curriculum.

460-3 Vocational Teaching Competencies I
Covers basic competencies of teaching for beginning vocational teachers.

461-3 Vocational Teaching Competencies II
Covers basic competencies of teaching for beginning vocational teachers, including lab management and evaluation. Prerequisite: VOE 460.

462-3 Vocational Teaching Competencies III
Covers basic competencies of teaching for beginning vocational teachers, including individualized learning styles and performance in practice teaching situations. Prerequisite: VOE 460.

463-3 Methods for Incorporating Academic Skills in the Vocational Program
An analysis of occupational tasks and competency lists to identify related math, science, or communication skills necessary to succeed as workers in modern society. Includes methods of teaching academics as applied to work or laboratory skills or operations.

464-3 to 9 Methods and Strategies for At-Risk Students
This course focuses on helping teachers develop skills in working with at-risk students enrolled in their programs. Emphasis will be on emotionally, academically, and economically disadvantaged risk students, examining the impact of culture on students and teachers and exploring alternative teaching strategies and program modifications.

465-3 Workforce Education: Employability Skills and Entrepreneurship
Designed to present current requirements and methods of teaching work/employability, life and leadership skills. Includes strategies, materials, and learning activities to implement employability and entrepreneurship in workforce education programs.

466-3 Vocational Reading Improvement
Techniques of diagnosing reading problems of the secondary vocational students. Assessment of readability of text and technical materials with emphasis on a selection of materials and strategies for individual students.
467-3 Organization and Administration in Marketing Education
The organization, administration, and structure of marketing education as affected by federal and state legislation, local practices and guidelines, and national standards adopted by the profession. Prerequisite: ED 214 through 221 or equivalent.

468-4 Methods of Teaching Marketing Education
Selection, organization, and presentation of subject matter in high school and adult extension programs. Methodology and teaching techniques will be emphasized through theory and practice. Participation experience required during enrollment in course. Prerequisite: ED 214 through 221 or equivalent. Corequisite: ED 323.

469-3 Coordination Techniques in Workforce Education
Effective coordination strategies and procedures in the administration and management of cooperative programs in high schools, and in adult and postsecondary education.

470-1 to 4 Workshop in Vocational Education
Intensive practical study in vocational education. May be taken for letter grade or pass/unsatisfactory.

471-8 Introduction into Workforce Teaching
The development of basic cognitive and performance skills in pedagogy required by new workforce teachers to earn a vocational teacher license.

472-3, 473-3, 474-3 Supervised Teaching in Workforce Education I, II, III
Development of basic knowledge, skills, and attitudes required for vocational certification of new, noncertified vocational teachers. Prerequisite: for 472, VOE 471; for 473, VOE 472; for 474, VOE 473.

475-4 Workforce Teaching Follow-up Workshop
Refinement of curriculum development, motivation, leadership, and human relations skills required by employed workforce education teachers. Prerequisite: VOE 471, 472, 473, 474.

476-1, 477-1, 478-1 Inservice Education IV, V, VI
Development of basic knowledge, skills, and attitudes required for vocational certification of new noncertified vocational teachers. Prerequisite: for 476, VOE 471, 472, 473, 474, 475; for 477, VOE 476; for 478, VOE 477.

479-3 Clinical Project in Vocational Education
Addresses special problem areas associated with motivating students, classroom management, discipline, handicapped and disadvantaged students, teacher liability, teaching and learning principles, instructional strategies, evaluation, advisory committees, curriculum, lesson planning, and/or safety. Prerequisite: VOE 474.

481-3 Curriculum in Marketing Education
Securing, evaluating, and organizing instructional material and the development of curriculum and experiences for high school marketing education cooperative classes and adult marketing education courses. Prerequisite: ED 214 through 221, VOE 467.

Women's Studies/WMS
Note: See quarterly class schedule or departmental advisor for further enrollment restrictions, requirements, or special course information.

200-4 Approaches to Women's Studies
(Also listed as PLS 225.) Introduces historical and contemporary feminist thought and explores the importance of gender as a category for analysis to understand social, cultural, political, and economic forces.

300-4 Introduction to Gender History: Special Topics
Courses will survey special topics in gender history. Topics may include masculinity, femininity, sexuality, family, and women's history. Focus may be on one nation, region, or a comparative perspective. Also listed as HST 220.

399-4 Studies in Selected Subjects
Problems, approaches, and topics in the field of women's studies. Titles vary. Topics vary. May be taken for letter grade or pass/unsatisfactory. Prerequisite: WMS 200 or permission of instructor.

400-4 Gender History
Course will allow intensive analysis of subjects in gender history. Topics may include masculinity, femininity, sexuality, family, and women's history. Focus may be on one nation, region, or a comparative perspective. Also listed as HST 486.

450-4 Feminist Thought
(Also listed as PLS 405) An exploration of feminist interpretations and critiques of Western political theory. An examination of the development of contemporary feminist thought.

498-1 to 4 Independent Field Experience
Supervised individual projects that may involve internships with women's organizations or other field experiences. Titles vary. May be taken for letter grade or pass/unsatisfactory. Prerequisite: WMS 200 or permission of instructor.

499-1 to 4 Independent Study
Supervised individual research on selected topics. Arranged between students and faculty member directing the study. Titles vary. May be taken for letter grade or pass/unsatisfactory. Prerequisite: WMS 200 or permission of instructor.
TECHNICAL COURSE DESCRIPTIONS
Offered at the Wright State University–Lake Campus
Technical courses are taught at the Wright State University—Lake Campus. The Lake Campus offers associate and baccalaureate degree programs, as well as bachelor’s degrees in Early Childhood Education and Organizational Leadership; a B.S.N. completion program for registered nurses who wish to receive their bachelor’s degree; a weekend M.B.A. for working professionals; and other master’s level programs including Education and Educational Leadership. Many of these programs also include courses described in the general course description section on pages 212–341.

A list of course abbreviations and an explanation of the course numbering system can be found on pages 210 and 211. Not all courses described here are offered every quarter or every year. For a more detailed listing of prerequisites, enrollment restrictions, and specific courses offered in a particular quarter, consult the Wright State class schedule published each fall, winter, spring, and summer.

**Engineering Technology/TEG**

**141-2 Development of Engineering and Technology**

Historical perspective of the development of engineering, science, and technology, including the interrelationships of technology and society.

**145-4 Engineering Drawing/CAD I**

Basic concepts of engineering drawing applied to manual and computer-aided drafting. Orthographic projection to produce complete multiview drawings. Computer basics for drawing set-up, construction, and file management. Two hours lecture, four hours lab. Corequisite: TMT 113 or permission of instructor.

**146-4 Engineering Drawing/CAD II**

TEG 145 continuation. Orthographic projection techniques are expanded to include sectional, auxiliary, and pictorial views. CAD concepts expanded to dimension styles, blocks, x-refs, paper and model space, UCS, and other topics. Two hours lecture, four hours lab. Prerequisite: TEG 145 or permission of instructor.

**147-4 Engineering Drawing/CAD III**

Design concepts applied to specific topics: threads, cams, weld representations, geometric dimensioning and tolerancing, developments, and descriptive geometry. Student will produce assembly, detail, and pictorial drawings. Two hours lecture, four hours lab. Prerequisite: TEG 146 or permission of instructor.

**150-3 Manufacturing I**

An introduction to many of the basic tools, machines, and measuring instruments used in the manufacturing industry. Emphasizes safety in the operation of industrial metalworking equipment, understanding material cutting science, and logical process decisions. Lab work emphasizes turning operations and permanent metal joining techniques. Two hours lecture, two hours lab. Prerequisite: TMT 113 or permission of instructor.

**151-3 Manufacturing II**

A continuation of TEG 150. Course involves further discussion of manufacturing processes as well as hands-on machining experience. Lab work emphasizes milling operations, welding operations, and EDM machining. Two hours lecture, two hours lab. Prerequisite: TEG 150 or permission of instructor.

**152-4 Automated Manufacturing I**

An introduction to the operation and programming of computer numerically controlled equipment. The student will learn the process of writing and editing CNC programs and the basic principles of CAD-CAM software operation. Two hours lecture, four hours lab. Prerequisite: TEG 150 or permission of instructor.

**153-4 Automated Manufacturing II**

A step-by-step process through the operation of computer-aided-manufacturing software to manipulate part programs and produce standard CNC code. Uses the basic principles of CAD for product design and CAM to set up tool paths, offsets, and other required information to produce the CNC codes and manufacture the parts. Two hours lecture, four hours lab. Prerequisite: TEG 152, TMT 114, or permission of instructor.

**160-4 Fundamentals of AC/DC Electronics**

Surveys basic concepts of electricity, voltage, power, and energy; symbology per industry standards; and series, parallel, and combination circuits and their applications. Introduction to AC quantities, including magnetic, capacitive, and inductive quantities, and the fundamental operation of motors and generators. Two hours lecture, four hours lab. Prerequisite: TMT 114 or permission of instructor.

**161-4 Industrial Control Circuits**

Introduction to semiconductor theory fundamentals and applications, AC/DC fundamentals using motors and controlling circuits, ladder diagrams, sequential analysis, and evaluation of symbology used in control circuits, and basics of programmable logic controllers are introduced. Two hours lecture, four hours lab. Prerequisite: TEG 160 or permission of instructor.
201-4 Statics
Forces, resultants, components, moments; equilibrium of particles and rigid bodies; analysis of structures; centroids and moments of inertia. Prerequisite: TMT 115; PHY 101, 111.

202-4 Dynamics
Motion of particles and rigid bodies: displacement, velocity, acceleration, force, and mass; torque, mass moments of inertia, rotation; work-energy relation for particles and rigid bodies. Prerequisite: TEG 201.

203-4 Strength of Materials
Axial stress and strain, shear stress and strain, torsion of circular shafts, combined stresses; shear and bending moment diagrams; deflection of beams and columns; modes of failure. Prerequisite: TEG 202.

204-4 Machine Design I
Three-dimensional design with solid modeling. Creation of primitives, complex solids, solid model editing, two-dimensional extraction and extrusion. Production of both engineering and pictorial drawings. Engineering aspects of solid model design. Two hours lecture, four hours lab. Prerequisite: TEG 147 or permission of instructor.

205-4 CAD/CAM Operations
Studies the relationship of CAD and CAM operations. Student will use three-dimensional models as a database for automated code generation and manufacture of products on standard CNC machines. Two hours lecture, four hours lab. Prerequisite: TEG 147 or permission of instructor.

209-3 Fluid Mechanics
Basic study of hydraulics and pneumatics. Applications of hydraulic principles to industrial control systems and compressed air systems to common industrial control circuits. Prerequisite: PHY 101, 111; TMT 113.

218-3 Facility Design
Material flow, warehousing, quantitative techniques, estimating, planning, and design of industrial and service facilities with emphasis on material handling, production and office layout, management, personnel, aesthetics, and the environment.

219-3 Industrial Safety
Introduces students to a comprehensive approach to the central factors involved in developing safe practices and conditions. Imparts the ability to set up safety organizations, conduct safety education and training, and recognize the effect of plant layout, mechanical guards, and occupational health hazards on injury rates and accident costs. Includes the economic and engineering aspects of fire protection, personal protection equipment, industrial waste disposal, and the analysis of a safety program.

221-4 Automation and Robotics
Application programming course on automated manufacturing. Robotic programming with pendant and BASIC. Cell interfacing, robot, CNC, and support devices operating in a BASIC programming environment. Two hours lecture, four hours lab. Prerequisite: TEG 205 or TEG 153 or permission of instructor.

295-1 to 4 Independent Study
Directed study on selected topics.

297-1 to 5 Studies in Selected Topics
Problems, approaches, and topics in the field of engineering. Titles vary. May be taken for letter grade or pass/unsatisfactory.

Technical Accountancy/TAC

210-3, 211-3 Financial Accounting I, II
Development of financial accounting theory and its application to complex problems in the evaluation of balance sheet accounts, determination of net income, and preparation of financial statements. Prerequisite: for 210, ACC 203; for 211, TAC 210.

220-3, 221-3 Cost Accounting I, II
Practice of cost accounting and cost procedures in industry: job order, process, and standard cost methods. Prerequisite: for 220, ACC 203; for 221, TAC 220.

224-3 Payroll Accounting
Familiarization of payroll accounting systems, understanding tax laws in relation to payroll, and practical application to records and related tax forms. Prerequisite: ACC 202.

225-3, 226-3 Tax Accounting I, II
Income tax regulations related to business and individual income tax reporting. Prerequisite: for 225, ACC 203; for 226, TAC 225.

260-3 Computerized Accounting
Study of software programs for accounting applications. Reviews the process of set-up, initial entries, and analysis of data compiled. Prerequisite: CS 205, ACC 203.

295-1 to 3 Independent Study
Directed study on selected topics.

297-1 to 5 Studies in Selected Subjects
Problems, approaches, and topics in the field of accounting. Titles vary. May be taken for letter grade or pass/unsatisfactory.

299-4 Internship
Practical business experience in accounting for qualified students under the joint planning and coordination of faculty, student, and business representative.
Technical Administration/TAD

232-3 Business Law
The study of law as it relates to business organizations and transactions. Considers the nature and classification of law, courts, torts, contracts, corporations, and negotiable instruments.

Technical Data Processing/TDP

210-3 Electronic Spreadsheets
Use of the electronic spreadsheet as an integrated program that combines spreadsheet processing, word processing, and data base management software with graphics capabilities. Emphasis on how to save, retrieve, extract data, create a spreadsheet, and use worksheet commands, database commands, and graphic commands. Two hours lecture, two hours lab. Prerequisite: CS 205 or permission of instructor.

295-1 to 3 Independent Study
Directed study on selected topics. May be taken for letter grade or pass/unsatisfactory.

297-1 to 4 Studies in Selected Topics
Problems, approaches, and topics in the field of data processing. Titles vary. May be taken for letter grade or pass/unsatisfactory.

299-4 Internship
Practical data processing experience under the joint planning and coordination of faculty, student, and business representative. May be taken for letter grade or pass/unsatisfactory. Completion of 60 hours of course work required.

Technical English/TEN

085-4 Basic Writing
Helps students develop and improve writing skills. Subject areas include grammar, sentence structure, paragraph development, essay writing, and proofreading. Cannot be applied toward graduation. Graded pass/unsatisfactory.

Technical Finance/TFI

205-3 Business Finance
Introduction to basic concepts, principles, and analytical techniques of financial management. Emphasis on planning and managing assets, and financial structure decisions. Topics include asset management, capital budgeting, cost of capital, financial leverage, and the demands for funds in the business sector of the economy. Forms of business financing and fundamental concepts of capital budgeting are analyzed. Prerequisite: ACC 203.

Technical Management/TMG

201-3 Fundamentals of Management
Basic fundamentals of the process of management applied to business organizations. Emphasis on the practical applications of techniques employed by managers at lower and middle organizational levels.

202-3 Labor Relations
Consideration of the practices, principles, and organization of collective bargaining. Study of the techniques of mediation and the agencies involved in mediation. Causes and cures of labor disputes. Prerequisite: TMG 201 or 210.

210-3 Personnel Management
Study of the characteristics, purposes, objectives, and techniques of supervision and coordination of the work of others. Discussions include employment interviewing, training procedures, supervision, and improvement of human relations. Prerequisite: TMG 201.

250-3 Purchasing
Composition of a purchasing office; buying the right quality from the right vendor; buying to support inventory control; make-versus-buy philosophy, and some legal aspects of buying. Prerequisite: TMG 201 or TMG 202.

270-3 Production Management
Introduction to the functions making up the production system, including product parts manufacture, process routing, quality standards, work measurement, work methods, scheduling, and inventory control. Prerequisite: TMG 201.

280-3 Small Business Management
Stresses business management functions important to small businesses, including single ownership, partnership, incorporation, capitalization and financing requirements, legal requirements, production, and marketing arrangements. Prerequisite: TMG 201 or TMG 202.

290-4 Comprehensive Management
Integrates students' two-year programs and promotes management problem-solving capabilities. Prerequisite: TMG 202, TMG 202; or permission of instructor.

295-1 to 3 Independent Study
Directed study on selected topics.

299-4 Internship
Practical business experience in management for qualified students under the joint planning and coordination of faculty, student, and business representatives. Completion of 60 hours of course work required.
Technical Marketing/TMK

201-3 Basic Marketing I
Study of the functions of marketing in the American business system with emphasis on economic and social determinants. Prerequisite: EC 201, MTH 127.

202-3 Basic Marketing II
Practical evaluation of marketing functions relative to the product development, promotion, pricing, distribution, and establishing marketing objectives. Prerequisite: TMK 201.

290-4 Comprehensive Marketing
Integrates students’ two-year programs and promotes marketing problem-solving capabilities. Prerequisite: TMG 202 or 210, TMK 202; or permission of instructor.

295-1 to 3 Independent Study
Directed study on selected topics.

299-4 Internship
Practical business experience in retail marketing for qualified students under the joint planning and coordination of faculty, students, and business representatives. Completion of 60 hours of course work required.

Technical Mathematics/TMT

113-4 Technical Mathematics I
An introduction to the real number system and operations with signed numbers; solving first-degree equations; products and factoring of monomials and polynomials; working with solving equations and radicals; and an introduction to right triangular trigonometry. Prerequisite: TMT 113.

114-4 Technical Mathematics II
Includes work with vectors; j operators; logarithmic functions; solving equations; some theory of equations, inequalities, properties of the trigonometric functions, and variations. Prerequisite: TMT 114.

115-4 Technical Mathematics III
Topics covered are variations, progressions, properties of the trigonometric functions, inverse trigonometric functions, and analytical geometry. Prerequisite: TMT 114.

116-4 Technical Calculus
Introduces topics of calculus such as limits, derivative and applications, integration and applications, differentiation of transcendental functions, and methods of integration. Prerequisite: TMT 115.

Technical Office Administration/TOA

101-1, 102-1, 103-1, 104-1, 105-1, 106-1, Professional Development I, II, III, IV, V, VI
Emphasizes professional development in office procedures, dress, personality, leadership, and other aspects of business etiquette.

111-3 Speedwriting I
Covers skills in writing and reading alphabetic shorthand with emphasis on dictation and transcription. Prerequisite: OA 211 or permission of instructor.

112-3 Speedwriting II
Continuation of TOA 111 and Speedwriting I, with emphasis on speed and production of documents. Prerequisite: TOA 211.

115-3 Business/Office Correspondence
Study of terminology and formats used in business communication: letters, reports, memos, dictation, grammar fundamentals, sentence construction, punctuation rules, and spelling. Prerequisite: ENG 101, OA 212.

200-3 Software Applications
Study of computer skills by utilizing various software packages for legal, medical, and administrative office applications. Two hours lecture, two hours lab. Prerequisite: CS 205, OA 211 or permission of instructor.

223-3 Word Processing Simulations
Simulations in word processing functions using merge, list processing, math, and sort. Covers medical, legal, and executive situations. Six hours lab. Prerequisite: OA 222.

224-3 Office Procedures I
Integrates the development of operational functions and decision-making competencies. Simulations in executive, medical, and legal procedures including experiences in telephone and communication techniques, word processing, and administrative services. Prerequisite: OA 211; TOA 250 or 251 or 252.

225-3 Office Procedures II
Continuation of TOA 224. Prerequisite: TOA 224.

226-3 Office Procedures III
Continuation of TOA 225. Prerequisite: TOA 225.

230-3 Records Management
Filing systems and procedures. Combines technical aspects of records technique with sound principles of management.

231-3 Office Management
Office organization; emphasis on work flow, proper equipment, problems in supervision, human relations, and management techniques.
233-3 Machine Transcription I
Executive, medical, and legal transcription from cassettes, emphasizing skills needed in today's word processing environment. Two hours lecture, two hours lab. Prerequisite: OA 213, 220; TOA 250 or 251 or 252.

234-3 Machine Transcription II
Continuation of TOA 233 including executive, medical, and legal projects. Two hours lecture, two hours lab. Prerequisite: TOA 233.

235-3 Calculator Applications
Operation of electronic display and printing calculators with business math and office applications. Two hours lecture, two hours lab.

241-3 Beginning Desktop Publishing
Business course using a computer graphic design system to produce typeset-quality text and graphics such as newsletters, letterheads, brochures, and manuals. Two hours lecture, two hours lab. Prerequisite: OA 211 or EDT 211.

242-3 Advanced Desktop Publishing
Continuation of TOA 241 using more advanced features and applications of graphics and software programs. Two hours lecture, two hours lab. Prerequisite: TOA 241.

243-3 Desktop Publishing Applications
An overview of desktop publishing systems using advanced concepts and terminology. Study of the principles of design and the publishing cycle. One hour lecture, four hours lab. Prerequisite: TOA 241, 242.

250-3 Executive Terminology
Study of executive terminology and other basic aspects of the executive assistant profession. Corequisite: OA 211.

251-3 Legal Terminology
Study of legal terminology and other basic aspects of the legal assistant profession. Corequisite: OA 211.

252-3 Medical Terminology
Study of medical terminology and other basic aspects of the medical assistant profession. Corequisite: OA 211.

253-3 Medical Terminology II
Continuation of TOA 252. Covers basic vocabulary utilized in medical office environment. Prerequisite: TOA 252.

255-3 Medical Coding
Study of medical skills in CPT coding for insurance and medical documents using reference manuals and computer software. Prerequisite: TOA 253.

295-1 to 3 Independent Study
Directed study on selected topics.

297-1 to 5 Studies in Selected Topics
Problems, approaches, and topics in the field of office administration. May be taken for letter grade or pass/unsatisfactory. Titles vary.

299-4 Internship
Practical secretarial experience under the joint planning and coordination of faculty, student, and business representative. Completion of 60 hours of course work required. May be taken for letter grade or pass/unsatisfactory.

Technical Study Skills/TSS

051-1 Reading Comprehension I
Emphasis is placed on improving reading skills, comprehension, concentration, and related vocabulary development. This is accomplished by using individualized instruction in sequenced kits and other related materials. Graded pass/unsatisfactory.

052-1 Reading Comprehension II
Continuation of TSS 051. Graded pass/unsatisfactory.

061-1 Vocabulary Development I
Allows students to proceed at their own pace. Provides students with one-on-one instruction. Students work toward improved vocabulary, concentrating on techniques of unlocking meaning through contextual clues and knowledge of Latin and Greek roots, prefixes, and suffixes. Students formulate data retention cards to master specific or general vocabulary of a discipline/course. Graded pass/unsatisfactory.

062-1 Vocabulary Development II
Continuation of TSS 061. Graded pass/unsatisfactory.

071-1 Speed Reading I
For students interested in becoming a more flexible reader. Emphasis is on refining skills and improving rate, comprehension, and efficiency. Recommended for those students who already read adequately, but desire techniques that will decrease the amount of time spent in reading. Helps determine at what rates different materials should be read. Graded pass/unsatisfactory.

072-1 Speed Reading II
Continuation of TSS 071. Graded pass/unsatisfactory.
FACULTY AND OFFICERS
University Officers

Board of Trustees

Term expires June 30 of year following member’s name

Chair
Matthew O. Diggs, Jr.
Vice Chair
Michael Adams
Secretary/Treasurer
Daisy Duncan Foster

Members
Robert E. Buerger 2001
Rajesh K. Soin 2002
Thomas E. Palmer 2003
Daisy Duncan Foster 2004
Matthew O. Diggs, Jr. 2005
Martin D. Jenkins 2006
Gail H. Littlejohn 2007
Michael Adams 2008
Bonnie G. Langdon 2009

Student Trustees (Nonvoting)
Brian E. Syska 2001
Michelle E. Novak 2002

Executive Officers

President
Kim Goldenberg
Past Presidents
Brago Golding
Robert J. Kegerreis
Paige E. Mulhollan
Harley E. Flack

Provost
Perry Moore
Vice President for Business and Fiscal Affairs
Matthew V. Filipic
Vice President for Student Affairs and Enrollment Services
Dan Abrahamowicz
Vice President for University Advancement
Marcia G. Muller
Executive Assistant to the President and Board of Trustees
Jacqueline McMillan

Associate Provost for Academic Affairs
Lillie P. Howard

Associate Provost for Research
Joseph F. Thomas, Jr.

Associate Provost
William E. Rickert

Assistant Provost for Planning
Sharon A. Lewis

General Counsel and Assistant Attorney General
Gwen M. Mattison

Academic Officers

Raj Soin College of Business, Dean
Berkwood M. Farmer

College of Education and Human Services, Dean
Gregory R. Bernhardt

College of Engineering and Computer Science, Dean
James E. Brandeberry

College of Liberal Arts, Dean
Mary Ellen Mazey

College of Science and Mathematics, Dean
Roger K. Gilpin

WSU–Lake Campus, Dean
TBA

School of Graduate Studies, Dean
Joseph F. Thomas Jr.

School of Medicine, Dean
Howard Part

University College, Dean
Lillie P. Howard

Wright State University–Miami Valley
College of Nursing and Health, Interim Dean
Patricia A. Martin

School of Professional Psychology, Dean
Leon D. VandeCreek

University Librarian
Victoria A. Montavon
Faculty


Adams, Robert W. Associate Professor of Political Science; Coordinator, Social Science Education A.B., 1955, Utica College; M.A., 1961, Syracuse University; Ph.D., 1969, The Ohio State University

Adragna, Norma C. Associate Professor of Pharmacology and Toxicology Ph.D., 1971, University of Cordoba (Argentina)

Agrawal, Abinash Associate Professor of Geological Sciences, B.Sc., 1977, Banaras Hindu University (India); M.Sc., 1977, Banaras Hindu University (India); Ph.D., 1990, University of North Carolina at Chapel Hill; M.S. (Environmental Engineering), 1995, Oregon Graduate Institute of Science and Technology.

Ahmad, Khurshid Associate Professor of Finance and Financial Services B.A., 1953, University of Karachi (Pakistan); M.A., 1955, Punjab University (Pakistan); Ph.D., 1970, University of Pennsylvania

Ainina, M. Fall Professor of Finance H.E.C., 1977, Universite de Tunis; M.B.A., 1980, Ball State University; Ph.D., 1986, Arizona State University

Akhbari, Marlena L. Assistant Professor of Finance B.A., 1975, Bowdoin College; M.B.A., 1992, Wright State University; Ph.D., 1999, University of Cincinnati


Al-Khatib, Wasfi G. Assistant Professor of Computer Science and Engineering B.S., 1990, Kuwait University; M.S., 1995, Ph.D., 2000, Purdue University

Alter, Gerald M. Associate Professor of Biochemistry and Molecular Biology B.A., 1968, Albion College; Ph.D., 1975, Washington State University


Alvarez, Francisco J. Assistant Professor of Anatomy B.S., 1984, Ph.D., 1987, Complutense University and Cajal Institute, Madrid (Spain)


Amer, Maher S. Assistant Professor of Materials Science and Engineering B.Sc., 1987, M.Sc., 1990, Alexandria University (Egypt); Ph.D., 1995, Drexel University

Amon, James P. Associate Professor of Biological Sciences B.S., 1965, University of Cincinnati; M.A., 1968, Ph.D., 1974, College of William and Mary

Amos, Oris E. Professor Emeritus of Education A.B., 1951, Virginia State College; M.A., 1963, Ph.D., 1971, The Ohio State University

Anderson, Liam Assistant Professor of Political Science B.A., 1987, University of Nottingham (U.K.); M.Phil., 1990, University of Cambridge (UK); Ph.D., 2000, University of Georgia

Apeilian, Marie Clinical Instructor of Nursing B.A., 1977, Concordia College; M.S.N., 1997, University of Medicine and Dentistry

Arasu, K. T. Professor of Mathematics and Statistics B.Sc., 1976, M.Sc., 1977, Panjab University (India); Ph.D., 1983, The Ohio State University

Arbagi, Martin Associate Professor of History A.B., 1961, Georgetown University; M.A., 1967, Ph.D., 1969, Rutgers University at New Brunswick

Arlian, Larry G. Professor of Biological Sciences; Brage Golding Distinguished Professor of Research; Director, Ph.D. Program in Biomedical Sciences B.S., 1966, M.S., 1968, Colorado State University; Ph.D., 1972, The Ohio State University

Aswal, Abdul A. S. Associate Professor of Computer Science and Engineering and Electrical Engineering B.S.E.E., 1984, Bangladesh University of Engineering and Technology; M.S.E.E., 1986, The Wichita State University; Ph.D., 1989, University of Dayton


Baird, Scott E. Associate Professor of Biological Sciences B.S., 1979, University of Toledo; Ph.D., 1988, University of Connecticut Health Center


Baker, Marjorie E. Associate Professor of Social Work B.A., 1972, Wright State University; M.S.W., 1984, Ph.D., 1995, The Ohio State University

Ballantine, Jeanne Professor of Sociology B.S., 1963, The Ohio State University; M.A., 1966, Columbia University; Ph.D., 1971, Indiana University

Bambakidis, Gust Professor of Physics; Department Chair B.S., 1958, University of Akron; M.S., 1963, Ph.D., 1966, Case Western Reserve University

Barbour, Clyde D. Associate Professor of Biological Sciences A.B., 1958, Stanford University; Ph.D., 1966, Tulane University of Louisiana
Bargeruff, Mary E. Assistant Professor of Education B.A., 1977, University of Evansville; M.Ed., 1988 University of Houston; Ph.D., 1998, Miami University


Barr, David L. Professor of Religion; B.A., 1965, Fort Wayne Bible College; M.A., 1969, Florida State University

Basista, Beth Assistant Professor of Physics B.S., 1983, University of Akron; Ed.D., 1990, University of Cincinnati

Basista, Al Professor of Pathology and Department Chair; Course Director, Pathology; Director, Lymphology Lab M.B., B.Ch., 1950, D.M., 1960, D.M.Sc., 1960, D.M.Sc., 1962, Cairo University School of Medicine; L.M.S.S.A., London (England)

Battino, Rubin D.M.Sc., 1983, University of Akron; Ph.D., 1988, University of Illinois

Baxter, David E. Assistant Professor of Philosophy B.A., 1975, Illinois State University; M.A., 1981, Miami University

Becker, Carl Professor Emeritus of History B.A., 1949, Otterbein College; M.A., 1950, University of Wisconsin; Ph.D., 1971, University of Cincinnati

Becick, Donald J. Assistant Professor of Philosophy B.A., 1963, Western Michigan University; M.A., 1967, Ph.D., 1972, The Ohio State University

Belcher, Janice Associate Professor of Nursing B.S.N., 1973, M.S., 1976, The Ohio State University; Ph.D., 1991, Medical College of Virginia

Bellisari, Anna Associate Professor of Anthropology; Director, University Honors Program B.A., 1962, Wittenberg University; M.A., 1976, Ph.D., 1984, The Ohio State University

Benjamin, Matthew Associate Professor of Theatre Arts B.F.A., 1987, North Carolina School of the Arts; M.F.A., 1991, University of Cincinnati

Benner, Carl V. Professor Emeritus of Mathematics Education and Mathematics; Frederick A. White Distinguished Professor of Service B.S., 1957, Rio Grande College; M.A., 1960, University of Northern Iowa; M.S., 1960, Purdue University; Ed.D., 1965, Bowling Green State University; Ph.D., 1970, The Ohio State University

Benett, Kevin B. Associate Professor of Psychology A.B., 1979, Ohio University; M.A., 1982, Ph.D., 1984, The Catholic University of America

Berberich, Steven Associate Professor of Biochemistry and Molecular Biology B.S., 1985, Ph.D., 1990, Wright State University

Bergdahl, Jacqueline Instructor of Sociology B.A., 1989, University of Maryland; M.A., 1991, Ph.D., 1996, University of New Mexico

Bernhardt, Gregory R. Professor of Education; Dean, College of Education and Human Services B.A., 1971, Colorado State University; M.S., 1973, Kansas State Teachers College; Ed.D., 1979, University of Northern Colorado

Bertsch, Deborah Lecturer in English B.A., 1990, Northern Kentucky University; M.A., 1993, Miami University

Bethke, Richard J. Associate Professor of Electrical Engineering; Chair, Department of Mechanical and Materials Engineering B.S.M.E., 1965, Ph.D., 1971, University of Wisconsin

Beumer Johnson, Angela Assistant Professor of English and Education B.A., 1991, M.A. 1996, Ball State University; Ph.D., 2000, The Ohio State University

Bigley, Nancy J. Professor of Anatomy B.S., 1953, Pennsylvania State University; M.S., 1955, Ph.D., 1957, The Ohio State University


Blair, D. Bartlett Professor of Theatre Arts B.A., 1973, State University of New York College at Potsdam; M.F.A., 1976, University of Minnesota

Blair, John P. Professor of Economics B.S., 1969, M.A., 1970, Eastern Illinois University; Ph.D., 1974, West Virginia University


Bland, Leland D. Professor of Music; Coordinator, Music Theory and Literature B.S., 1962, M.A., 1963, Northeast Missouri State University; Ph.D., 1973, University of Iowa

Block, David J. Director, Financial Services Program B.S., 1969; M.A., 1983, Central Michigan University; M.S., 1985, Florida Institute of Technology; CFP, 1991

Bogan, Barbara Assistant Professor of Nursing B.S.N., 1962, M.S., 1965, The Ohio State University

Bogimar, Bela J. Professor of Social Work and Community Health B.S., 1962, Ecole Sociale de Louvain (Belgium); M.S.W., 1966, University of Wisconsin at Milwaukee; Ph.D., 1974, University of Wisconsin at Madison

Bogumil, David D. Assistant Professor of Sociology, B.A., 1985, M.S., 1988, State University of New York at Buffalo; Ph.D., 1993, Purdue University
Bomick, Daniel D. Associate Professor of Chemistry B.S., 1979; M.S., 1981, Wright State University; Ph.D., 1986, Michigan State University

Booth, David M. Associate Professor of Music; Director of Bands. B.Mus., 1979, Boise State University; M.Mus., 1987, University of Oregon; Doctor of Musical Arts, 1994, University of Oklahoma

Boris, Judy Clinical Assistant Professor of Nursing B.S.N., 1990, M.S., 1993, Wright State University

Bourbakis, Nikolaos Director of the Information Technology Research Institute and OBR Distinguished Professor of Information Technology B.S., 1974, National University of Athens (Greece); Ph.D., 1983, University of Patras (Greece)


Brucher, Peter S. Professor Emeritus of English B.A., 1954, Wittenberg University; M.A., 1956, University of Washington; Ph.D., 1966, University of Pennsylvania


Brackney, Kennard S. Associate Professor of Accountancy and Department Chair B.S.B.A., 1981, M.S., 1985, Old Dominion University; Ph.D., 1990, University of North Carolina; CPA (Inactive)

Brame, Roderic L. Assistant Professor of Geological Sciences B.S., 1992, M.S., 1995, Radford University; Ph.D., 2000, Virginia Polytechnic Institute and State University

Brandenberry, James E. Professor of Computer Science, Electrical Engineering, and Computer Engineering; Dean, College of Engineering and Computer Science B.S.E.E., 1961, M.S.E.E., 1963, University of Toledo; Ph.D., 1969, Marquette University

Broughton, Nancy Instructor of Spanish B.A., 1979, Michigan State University; M.A., 1981, University of Notre Dame; Ph.D., 1993, Michigan State University

Brown, Hunting W. Lecturer of Biological Sciences: Associate Director, Institute for Environmental Quality B.A., 1968, Colgate University; M.A., 1975, University of South Florida; J.D., 1983, University of Akron School of Law

Brown, Thomas L. Assistant Professor of Physiology and Biophysics B.S., 1986, The Ohio State University; Ph.D., 1993, University of Cincinnati

Brun, Carl Associate Professor of Social Work B.S., 1981, University of Dayton; A.M., 1983, University of Chicago; Ph.D., 1993, The Ohio State University

Buell, Glen R. Associate Professor Emeritus of Chemistry, W.S.U.–Lake Campus B.S., 1953, M.S., 1955, University of Missouri; Ph.D., 1961, University of Kansas

Bukovsky, David M. Assistant Professor of Accountancy B.S., 1981, M.B.A., 1985, Youngstown State University; Ph.D., 1993, University of Kentucky; CPA (Inactive)

Bullock, John D. Professor of Ophthalmology and Surgery; Chair, Department of Ophthalmology: Professor of Physiology and Biophysics A.B., 1965, Dartmouth College; B.M.S., 1966, Dartmouth Medical School; M.D., 1968, Harvard Medical School; M.S., 1982, Wright State University

Bullock, Richard H. Professor of English and Director of Writing Programs A.B., 1973, Ohio University; M.A., 1977, Ph.D., 1981, The University of Virginia

Burns, Andrea Director, Chemical Laboratories B.S., 1968, M.S., 1970, Wright State University

Burton, G. Allen Professor of Environmental Sciences; Director, Institute for Environmental Quality B.S., 1976, Ouachita Baptist University; M.S., 1978, Auburn University; M.S., 1980, Ph.D., 1984, University of Texas at Dallas

Bush, Ratimaya Assistant Professor of Anthropology B.A., 1978, Michigan State University; M.A., 1988, Ph.D., 1997, The Ohio State University

Caldwell, Wendy Assistant Professor of Spanish B.A., 1990, College of Charleston; M.A., 1993, University of South Carolina; Ph.D., 1998, University of Georgia

Call, Edward P. Voluntary Associate Professor of Anatomy: Associate Clinical Professor of Surgery B.A., 1955, Dartmouth College; M.D., 1959, Yale University School of Medicine

Callender, A. Keith Associate Professor of Anesthesiology and Department Chair B.A., 1968, Walla Walla College; M.D., 1972, Loma Linda University

Campbell, Brent A. Assistant Professor of Engineering Technology, W.S.U.–Lake Campus B.S., 1985, M.A., 1989, Central State University

Campbell, Patrick E. Associate Professor of Psychology B.S., 1960, M.S., 1966, Kansas State College; Ph.D., 1968, University of Kansas

Canfield, Annette Clinical Instructor of Nursing B.S.N., 1990, M.S., 1994, Wright State University

Cantelupe, Eugene B. Professor Emeritus of English and Art History B.A., 1942, State University of New York at Buffalo; M.F.A., 1950, University of Iowa; Ph.D., 1959, Washington University

Carl, Stephen P. *Instruction of Computer Science and Engineering* B.S.E.E., 1986, Rice University; M.A., 1986, University of Texas at Austin

Carlson, Roger N. Assistant Professor of Education B.A., 1967, Northern Illinois University; M.Ed., 1972, Chicago State University; Ed.D., 1979, Western Michigan University

Carlson, Donald A. Associate Professor of History, WSU-Lake Campus B.A., 1958, M.A., 1960, Ph.D., 1964, University of Minnesota

Carmichael, Wayne Professor of Biological Sciences B.S., 1969, Oregon State University; M.S., 1972, Ph.D., 1974, University of Alberta (Canada)

Carney, Cindy K. Associate Professor of Geological Sciences B.S., 1980, Youngstown State University; Ph.D., 1987, West Virginia University

Caron, Linda Professor of Art History; Chair, Department of Art and Art History B.A., 1976, Smith College; Ph.D., 1981, Bryn Mawr College

Carrafiello, Susan B. Associate Professor of History; Director, Master of Humanities Program B.A., 1982, Mississippi State University; M.A., 1984, Ph.D., 1992, Vanderbilt University

Carusone, Peter S. Professor Emeritus of Marketing B.F.A., 1962, University of Cincinnati; M.B.A., 1965, Xavier University; Ph.D., 1969, The Ohio State University


Cavanaugh, Joseph K. Associate Professor of Economics, WSU-Lake Campus B.S., 1989, M.A., 1990, Miami University (Oxford); Ph.D., 1994, University of Kentucky


Cha, In-Hong Assistant Professor of Music, Director of Orchestral Studies Artist Diploma, 1986, College Consortium of Music; M.A., 1988, City College of New York; D.M.A., 1999, University of South Carolina


Chance, Larry L. Associate Professor Emeritus of Education B.S., 1966, M.A., 1967, Ball State University; Ph.D., 1973, University of Kansas

Chen, Chien-In H. Professor of Electrical Engineering and Computer Engineering B.S., 1981, National Taiwan University; M.S., 1986, University of Iowa; Ph.D., 1989, University of Minnesota

Chen, C. L. Philip Professor of Computer Science and Engineering B.S., 1979, National Taipei Institute of Technology (Taiwan); M.S., 1985, The University of Michigan at Ann Arbor; Ph.D., 1988, Purdue University

Cheng, Songlin Associate Professor of Geological Sciences B.S., 1972, National Cheng Kung University (Taiwan); M.S., 1979, Wright State University; Ph.D., 1984, University of Arizona

Chesn, Alan S. Lecturer in Management Science B.S., 1970, Bucknell University; M.S., 1973, Indiana University; M.B.A., 1989, Wright State University

Chesire, Jimmy Lecturer in English A.B., 1968, Cornell University; M.S., 1973, University of Nebraska; M.A., 1994, Wright State University


Chung, Soon M. Associate Professor of Computer Science and Engineering B.S., 1979, Seoul National University (South Korea); M.S., 1981, Korea Advanced Institute of Science and Technology; Ph.D., 1989, Syracuse University

Cico, Carol Associate Professor of Mathematics, WSU-Lake Campus B.S., 1964, M.S., 1966, The Ohio State University

Cipollini, Donald F. Assistant Professor of Biological Sciences B.S., 1990, M.S., 1993, Indiana University of Pennsylvania; Ph.D., 1997, Pennsylvania State University

Clark, Jerry D. Associate Professor of Physics B.S., 1976, University of Texas at Arlington; Ph.D., 1982, University of Texas at Dallas

Clark, Robert L. Associate Professor Emeritus of Education B.S., 1949, Murray State College; M.A., 1954, University of Kentucky; Ph.D., 1965, Southern Illinois University

Cleary, Michael J. Professor Emeritus of Management Science B.S., 1961, Norwich University; M.A., 1969, Ph.D., 1971, University of Nebraska

Cole, Donna Professor of Education B.A., 1971, Cleveland State University; M.A., 1975, West Virginia University; Ph.D., 1980, University of Utah

Coleman, Joseph W. Associate Professor of Management Science B.S., 1967, Pennsylvania State University; M.B.A., 1975, Golden Gate University; Ph.D., 1982, Arizona State University

Colle, Herbert A. Associate Professor of Psychology B.S., 1965, University of Wisconsin; Ph.D., 1969, University of Washington

Corbett, Adrian M. Associate Professor; Department of Physiology and Biophysics B.S., 1978, Texas A&M University at Galveston; Ph.D., 1984, University of Miami
Cordano, Mark Assistant Professor of Management B.A., 1983, Cornell University; M.B.A., 1991, Indiana University; Ph.D., 1998, University of Pittsburgh
Cornelius, Kenneth C. Associate Professor of Mechanical Engineering B.S., 1968, M.S., 1971, Ph.D. 1978, Michigan State University
Cornett, Carol L.
Correale, Robert M. Professor of English A.B., 1955, Saint Bonaventure University; M.A., 1960, Siena College; Ph.D., 1971, University of Cincinnati
Cox, Michael T. Assistant Professor of Computer Science and Engineering B.S., 1986, Ph.D., 1996, Georgia Institute of Technology
Craighead, Robert L., Jr. Assistant Professor of Mathematics and Statistics B.S., 1964, Tennessee A&I State University; M.S., 1970, University of Wyoming; Ph.D., 1991, The Ohio State University
Crampton, George H. Professor Emeritus of Psychology B.S., 1943, Washington State University; M.S., 1950, Ph.D., 1954, University of Rochester
Crews, Sandra Associate Professor of Theatre Arts B.A., 1978, University of Maryland; M.F.A., 1982, University of California at Davis
Cromer, Bruce Associate Professor of Theatre Arts B.F.A., 1981, Wright State University
Cronley, Maria Assistant Professor of Marketing B.S.B.A., 1987, M.B.A., 1989, Bowling Green State University; Ph.D., 2000, University of Cincinnati
Cross, Lawrence J. Professor Emeritus of Sociology A.B., 1943, M.A., 1951, Loyola University; Ph.D., 1962, University of Pennsylvania
Crusan, Deborah Assistant Professor of English B.S., 1988, Slippery Rock University; M.A., 1996, Ph.D., 1999, Pennsylvania State University
Cummings, Sue C. Professor Emerita of Chemistry B.A., 1963, Northwestern University; M.S., 1965, Ph.D., 1968, The Ohio State University
Curry, Donna Miles Associate Professor of Nursing B.S.N., 1976, M.S.N., 1979, St. Louis University; Ph.D., 1990, The Ohio State University
Curry-Jackson, Anita E. Associate Professor of Social Work and Department Chair B.A., 1968, Le Moyne-Owen College; M.S.S.A., 1970, Case Western Reserve University; Ph.D., 1987, Atlanta University
Custenborder, Catherine Associate Professor Emerita of Education, WSU–Lake Campus B.M.Ed., 1951, College of Mount Saint Joseph-on-the-Ohio; M.Ed., 1965, Ph.D., 1968, Ohio University

Dadras, Parviz Professor Emeritus of Mechanical Engineering and Materials Science and Engineering B.S., 1964, Abadan Institute of Technology (Iran); M.S., 1968, Ph.D., 1972, University of Delaware
Dahlin, Hank Associate Professor of Music; Director of Graduate Studies in Music; Director of Choral Activities B.Mus., 1979, Longwood College; M.M., 1987, University of South Florida; D.M.A., 1991, University of Missouri–Kansas City
David, Donald K. II Professor of Theatre Arts; Production Manager, Theatre Arts B.A., 1977, Saint Lawrence University; M.F.A., 1979, University of Utah
Davy, Jeannette Associate Professor of Management B.S., 1976, Viterbo College; Ph.D., 1986, University of Arizona, SPHR
Dean, Jay B. Associate Professor of Physiology and Biophysics B.S., 1979, Central Michigan University; M.S., 1981, Michigan Technological University; Ph.D., 1986, The Ohio State University
Deer, Joe Assistant Professor of Theatre Arts B.A., 1981, University of South Florida; M.F.A., 1996, Carnegie-Mellon University
Denison, Barbara B. Assistant Professor of Management Information Systems; Department Chair B.S., 1968, Denison University; M.B.A., 1974, University of Dayton; M.S., 1993, Wright State University
Berry, Charles Professor of Theatre Arts B.S., 1973, Northwestern University; M.A., 1975, University of Southern California; Ph.D., 1978, Northwestern University
DeStephen, Dan Professor of Communication; Director, Center for Teaching and Learning B.S., 1972, M.A., 1973, Bowling Green State University; Ph.D., 1977, University of Utah
Diamantes, Thomas Associate Professor of Education B.A., 1970, University of Alaska; M.Ed., 1982, Ph.D., 1991, University of Cincinnati
Dickey, Stephanie J. Hostetler Lecturer in English B.A., B.S., 1990, M.A., 1995, Wright State University
Dieslin, Melinda J. Instructor of Mathematics and Statistics B.S., 1979, Purdue University; M.S., 1985, University of Illinois at Chicago
Dittmar, Doris E. Associate Professor Emerita of Education; Coordinator of Early Childhood Education B.S., 1954, Oklahoma Baptist University; M.Ed., 1965, Wichita State University; Ed.D., 1969, Northern Illinois University
Dobson, Frank Associate Professor of English; Director, Bolinga Center B.A., 1973, State University of New York at Buffalo; M.A., 1975, University of Nevada; Ph.D., 1985, Bowling Green University
Doll, Valerie J. Lecturer of Education; Assistant Dean for Administration B.S., 1958, Simmons College; M.Ed., 1979, Wright State University
Dolson, David A. Associate Professor of Chemistry B.S., 1976, Eastern Illinois University; Ph.D., 1981, Indiana University
Dombrowski, Joanne Professor of Mathematics and Statistics B.S., 1968, Marygrove College; M.S., 1970, Ph.D., 1973, Purdue University
Dominic, David F. Associate Professor of Geological Sciences B.S., 1980, University of Dayton; M.A., 1983, State University of New York at Binghamton; Ph.D., 1988, West Virginia University
Donahoe, Mary A. Associate Professor of Theatre Arts B.A., 1965, M.A., 1969, University of Colorado; Ph.D., 1992, University of Oregon
Dong, Guozhu Associate Professor of Computer Science and Engineering B.Sc., 1982, Shandong University; M.Sc., 1985, Ph.D., 1988, University of Southern California
Doom, Travis E. Assistant Professor of Computer Science and Engineering and Electrical Engineering B.S., 1992, Bowling Green State University; M.S., 1994, Ph.D., 1998, Michigan State University
Doorley, Jane E. Clinical Assistant Professor of Nursing B.S.N., 1976, University of Northern Colorado; M.S., 1987, Wright State University
Dorn, Jacob H. Professor of History B.A., 1960, Wheaton College; M.A., 1962, Ph.D., 1965, University of Oregon
Douglas, Ana Maria P. Lecturer of French and Spanish B.S., 1979, Wright State University; M.A., 1985, Bowling Green State University
Douglas, Dora Lecturer of Mathematics and Statistics B.A., 1951, Spelman College; M.S.T., 1974, University of Dayton
Dovel, Thomas D. Associate Professor of Marketing; Department Chair B.S., 1959, M.B.A., 1961, Miami University
Dregalla, Herbert E., Jr. Professor and Chair, Department of Music B.M.E., 1969, Baldwin Wallace College; M.M., 1972, Manhattan School of Music; Ph.D., 1983, Case Western Reserve University
Dung, Tran Associate Professor of Economics B.S., 1967, University of Utah; M.A., 1975, Ph.D., 1978, Syracuse University
Dunne, James D. Assistant Professor of Education B.A. 1969, Widener College; M.A. 1990, Fairleigh Dickinson University; Ph.D. 1995, The Ohio State University
Durr, Marlene Associate Professor of Sociology; Director, Women's Studies Program B.S., 1978, M.A., 1979, M.A., 1985, Ph.D., 1993, State University of New York–Albany

Dustin, Jack Associate Professor of Urban Affairs and Department Chair; Director, Center for Urban and Public Affairs B.A., 1971, M.A., 1980, University of Akron; Ph.D., 1991, University of Delaware
Eakins-Reed, Barbara W. Associate Professor Emerita of Communication B.A., 1953, Allegheny College; M.A., 1968, Bowling Green State University; Ph.D., 1972, University of Iowa
Earl, Robert D. Professor Emeritus of Education B.S., 1954, Bluffton College; M.A., 1958, Miami University; Ed.D., 1967, Oklahoma State University
Edwards, Jean M. Associate Professor of Psychology B.A., 1972, University of Toronto (Canada); M.A., 1973, Ph.D., 1985, York University (Canada)
Endres, Carole R. Lecturer of Economics B.S., 1972, Kent State University; M.B.A., 1987, M.S., 1987, Wright State University
Engebretson, Darold Associate Professor of Professional Psychology; Adjunct Associate Professor of Education; Psychologist and Director, Psychological Services Center B.D., 1963, Luther Theological Seminary; B.A., 1966, M.Ed., 1967, Ph.D., 1969, University of Hawaii
Engelhardt, Carol Assistant Professor of History B.A., 1984, Boston College, Chestnut Hill; M.A., 1990, Washington University; Ph.D., 1997, Indiana University
Evans, Anthony B. Professor of Mathematics B.S., 1970, Imperial College of Science and Technology (England); M.S., 1972, Reading University (England); Ph.D., 1981, Washington State University
Farlow, Gary C. Associate Professor of Physics B.S., 1977, Guilford College; Ph.D., 1982, University of North Carolina at Chapel Hill
Farmer, Berkwood M. Associate Professor of Economics; Dean, Raj Soin College of Business B.S., 1960, M.S., 1963, Ph.D., 1970, North Carolina State University
Farmer, Linda L. Assistant Professor of Philosophy B.A., 1990, Concordia University; M.A., 1992, Ph.D., 1997, University of Ottawa (Canada)
Feld, William A. Professor of Chemistry B.S., 1966, Loras College; Ph.D., 1971, University of Iowa
Fetzer, Ronald Associate Professor Emeritus of Communication B.A., 1966, Heidelberg College; M.A., 1972, Kent State University; Ph.D., 1978, The Ohio State University

Fichtenbaum, Rudy H. Professor of Economics B.S., 1976, University of Missouri at Saint Louis; Ph.D., 1980, University of Missouri at Columbia

Findler, Michael J. Instructor of Computer Science and Engineering B.S., 1981, Loyola Marymount University; M.S., 1987, University of Dayton

Finegan, Colleen Associate Professor of Education B.A., 1972, Fairmont South High School; M.A., 1977, West Virginia University; Ed.S., 1985, University of South Florida; Ph.D., 1990, University of South Florida

Finkelstein, Leo Lecturer and Director of Technical Communications, College of Engineering and Computer Science B.A., 1968, University of North Carolina; M.A., 1969, University of Tennessee; Ph.D., 1978, Rensselaer Polytechnic Institute

Fitch, Diane E. Associate Professor of Art and Art History B.F.A., 1979, Portland School of Art; M.F.A., 1981, Indiana University

Fitzgerald, Edward A. Professor of Political Science B.A., 1971, Holy Cross College; M.A., 1976, Northeastern University; J.D., 1974, Boston College; Ph.D., 1983, Boston University

Flach, John M. Professor of Psychology B.A., 1975, St. Joseph's College; M.A., 1978, University of Dayton; Ph.D., 1984, The Ohio State University

Fleischauer, John F. Professor of English; B.A., 1961, Cornell University; M.A., 1966, Ph.D., 1970, The Ohio State University

Fortman, John J. Professor Emeritus of Chemistry B.S., 1961, University of Dayton; Ph.D., 1965, University of Notre Dame

Fortson, Stephen B. Associate Professor of Counselor Education; Chair, Department of Human Services B.A., 1983, University of North Carolina; M.R.C., 1988, Wright State University; Ed.D., 1994, University of Cincinnati

Fossom, Eric A. Assistant Professor of Chemistry B.S., 1987, University of Wisconsin Stevens Point; Ph.D., 1995, Carnegie Mellon University

Fowler, Barbara A. Associate Professor of Nursing B.S.N., 1981, M.S.N., 1983, Ed.D., 1988, University of Cincinnati

Foy, Brent D. Associate Professor of Physics B.S., 1985; Ph.D., 1991, Massachusetts Institute of Technology

Frederick, Stephen Associate Professor of Health, Physical Education, and Recreation B.S., 1967 Wilmington College; M.Ed., 1969, Ball State University; P.Ed., 1977, Indiana University


Friar, Billy W. Assistant Professor Emeritus of Mechanical Engineering B.A., 1953, Berea College; B.S., 1958, Virginia Polytechnic Institute and State University; M.S., 1959, Ph.D., 1970, The Ohio State University

Fricke, Gerd H. Professor Emeritus of Mathematics M.A., 1969, University of Kansas; Ph.D., 1971, Kent State University

Fritz, H. Ira Associate Professor Emeritus of Biochemistry and Molecular Biology B.S., 1958, Ph.D., 1964, University of California at Davis

Fulk, H. Roger Associate Professor of Office Information Systems, WSU–Lake Campus B.S., 1978, Ohio University; M.S., 1981, Bowling Green State University

Fulton, Janet Associate Professor of Nursing B.S.N., 1975, College of Mt. St. Joseph; M.S.N., 1980, University of Cincinnati; Ph.D., 1990, The Ohio State University

Funderburk, Samuel C. Professor of Political Science B.A., 1965, M.A., 1967, University of Florida; Ph.D., 1973, University of Iowa

Funkhouser, James W. Voluntary Professor of Microbiology and Immunology; Clinical Professor of Pathology B.M.T., 1951, University of Dayton; M.S., 1953, M.D., 1957, The Ohio State University

Fyffe, Robert E. W. Professor of Anatomy; Associate Dean for Research Affairs; and Director, Center for Brain Research B.S., 1975, University of Glasgow (Scotland); M.S., 1976, Ph.D., 1981, University of Edinburgh (Scotland)

Gabbert, Janice J. Professor of Classics and Department Chair B.A., 1970, Wright State University; M.A., 1972, Ph.D., 1982, University of Cincinnati

Gaines, Elliot Assistant Professor of Communication B.A., 1972, Rutgers University; M.A., 1993, Ph.D., 1995, Ohio University


Gallagher, John C. Assistant Professor of Computer Science and Engineering B.S., 1989, M.S., 1991, Ph.D., 1998, Case Western Reserve University

Gallimore, Jennie J. Professor of Biomedical and Human Factors Engineering B.A., 1983, M.A., 1985, California State University at Northridge; Ph.D., 1989, Virginia Polytechnic Institute and State University

Garber, Fred D. Associate Professor of Electrical Engineering; Chair, Department of Electrical Engineering B.S., 1975, Tri-State University; M.S., 1978, Ph.D., 1983, University of Illinois

Garcia, Oscar Professor of Computer Science and Engineering; Department Chair; NCR Distinguished Professor B.S.E.E., 1961, M.S.E.E., 1964, North Carolina State University; Ph.D., 1969, University of Maryland
Garner, Nancy G. Associate Professor of History

Garrison, David L. Professor of Spanish and Portuguese; Chair, Department of Modern Languages B.A., 1968, Wesleyan University; M.A., 1972, Catholic University of America; Ph.D., 1975, The Johns Hopkins University; M.A., 1978, Indiana University

Gayle, G. William Professor of Education B.S., 1974, Virginia Polytechnic Institute and State University; M.S., 1977, University of Wisconsin at La Crosse; Ph.D., 1988, The Ohio State University

Geibert, Ronald Professor of Art and Art History B.F.A., 1974, Creighton University; M.F.A., 1979, University of Nebraska


Gilkey, Robert H. Associate Professor of Psychology B.A., 1976, University of California at Berkeley; Ph.D., 1981, Indiana University

Gill, Humphrey G. Associate Professor of Psychology, WSU–Lake Campus; B.A., 1966, University of South Florida; M.S., 1969, New Mexico Highlands University; Ed.D., 1975, University of Northern Colorado

Gillen, John Professor of Family Practice and Department Chair B.A., 1952, Ohio University; M.D., 1956, Vanderbilt University

Gilpin, Roger K. Professor of Chemistry; Dean, College of Science and Mathematics B.S., 1969, Indiana State University; Ph.D., 1973, University of Arizona

Giron, David J. Professor of Microbiology and Immunology B.A., 1958, Los Angeles State College; M.A., 1963, Ph.D., 1968, University of Texas at Austin

Gleason, James J. Associate Professor Emeritus of English B.S., 1953, University of Dayton; M.A., 1957, Ph.D., 1969, The Ohio State University

Goldenberg, Kim Professor of Medicine; President B.S.E., State University of New York at Stony Brook; M.Sc., Polytechnic Institute of New York; M.D., Albany Medical College

Goldenberg, Robert A. Professor of Otolaryngology and Department Chair B.A., 1963, Stanford University; M.D., 1968, University of Louisville; M.S., 1973, University of Illinois

Goldfarb, Ivan J. Professor Emeritus of Chemistry B.S., 1953, University of Kentucky; M.S., 1955, Ph.D., 1959, University of Cincinnati

Goldfinger, Melvyn D. Associate Professor of Physiology and Biophysics B.A., 1969, Rutgers University; M.S., 1972, University of Maryland; Ph.D., 1978, State University of New York

Goldstein, David L. Professor of Biological Sciences B.A., 1979, University of Pennsylvania; M.A., 1980, Ph.D., 1983, University of California, Los Angeles

Gomez-Cambroner, Julian Associate Professor of Physiology and Biophysics Ph.D., 1986, Universidad Complutense of Madrid

Goodrich, Kathryn Clinical Instructor of Nursing B.S.N., 1987, Miami University; M.S., 1992, Wright State University

Goshtasby, A. Ardeshir Professor of Computer Science and Engineering B.E., 1974, University of Tokyo; M.S., 1975, University of Kentucky; Ph.D., 1983, Michigan State University


Graham, Margaret Clark Professor of Nursing A.S., 1973, Ferrum College; B.S.N., 1975, University of Virginia; M.S.N., 1977, Vanderbilt University; Ph.D., 1989, The Ohio State University

Graham, T. Scott Assistant Professor of Organizational Leadership B.S., 1976, Virginia Commonwealth University; M.S., 1984, Embry-Riddle University; M.S., 1985, Air Force Institute of Technology; Ph.D., 1992, University of Georgia


Grandhi, Ramana V. Professor of Mechanical Engineering; University Professor B.Tech., 1978, Regional Engineering College (India); M.S., 1980, Indian Institute of Technology (India); Ph.D., 1984, Virginia Polytechnic Institute and State University

Grasman, Keith A. Associate Professor of Biological Sciences B.S., 1989, Calvin College M.S., 1992, Ph.D., 1995, Virginia Polytechnic Institute and State University

Green, Barbara L. Associate Professor of History B.A., 1973, Presbyterian College; M.A., 1975, North Texas State University; Ph.D., 1980, University of Missouri

Green, December Associate Professor of Political Science; Director, International Studies Program B.A., 1982, M.A., 1983, Ph.D., 1988, University of South Carolina


Gressis, Nicolas Professor of Finance M.S., 1965, Rome (Italy); Ph.D., 1975, Pennsylvania State University

Griffin, Paul R. Professor of Religion; Program Director, African and African American Studies B.A., 1973, Wright State University; M.Div., 1976, United Theological Seminary; Ph.D., 1983, Emory University
Grossie, David A. Associate Professor of Chemistry
B.S., 1977, Texas Lutheran College; Ph.D., 1982, Texas Christian University

Grubbs, Robert D. Associate Professor of 
Pharmacology and Toxicology B.A., 1974, 
Denison University; M.A., 1977, Ph.D., 1981, 
University of Kansas

Gulas, Charles S. Associate Professor B.S., 1984, 
M.A., 1986, Youngstown State University; Ph.D., 
1994, University of Massachusetts at Amherst

Gue, Shumel Associate Professor of Statistics and 
and Community Health B.Ph., 1976, National Taiwan 
University (Taiwan); M.S., 1980, State University 
New York at Stony Brook; Ph.D., 1983, University 
of Pittsburgh

Guthrie, James R. Associate Professor of English 
B.A., 1973, University of Michigan; M.A., 1976, 
M.F.A., 1976, Ph.D., 1979, State University of New 
York at Buffalo

Gutierrez-Osuna, Ricardo Assistant Professor of 
Computer Science and Engineering B.S., 1992, 
Polytechnic Institute of Madrid; M.S., 1995, Ph.D., 
1998, North Carolina State University

Haas, Edward F. Professor of History B.A., 1967, 
Tulane University; Ph.D., 1972, University of 
Maryland at College Park

Hagan, Jarrell R. Adjunct Associate Professor of 
Environmental Sciences B.S., 1965, University of 
Wyoming; M.S., 1972, University of Arkansas

Hagen, Carol Assistant Professor Emerita of 
English, WSU–Lake Campus B.A., 1966, Ohio 
Northern University; M.A., 1968, Ball State 
University

Halik, John J. Professor of Obstetrics and 
Gynecology and Pharmacology and Toxicology; 
Chair, Department of Obstetrics and Gynecology 
B.S., 1950, West Virginia College of Pharmacy; 
B.S., 1954, West Virginia University School of 
Medicine; M.D., 1956, Medical College of Virginia; 
Ph.D., 1973, Kansas University Medical Center

Hall, Chris Associate Professor of English; Director 
of Graduate Studies in English B.F.A., 1969, M.A., 
1976, University of Utah; Ph.D., 1986, University 
of New Mexico

Halling, Kirsten, Assistant Professor of French 
B.A., 1987, Randolph-Macon College; M.A., 1989, 
Ph.D., 1996, University of Virginia

Halm, Dan R. Associate Professor of Physiology 
and Biophysics B.A., 1977, Ph.D., 1981, University 
of Iowa

Hambright, W. Grant Assistant Professor of 
Texas Tech University

Hamilton, Glenn C. Professor of Emergency 
Medicine; Associate Professor of Medicine; Chair, 
Department of Emergency Medicine B.S., 1969, 
M.D., 1973, University of Michigan

Hamilton, Richard Assistant Professor of 
Psychology B.S., 1974, University of New 
Hampshire; M.A., 1979, Ph.D., 1983, University 
of Illinois

Hannen, Russell A. Associate Professor Emeritus of 
Electrical Engineering B.S.M.E., 1953, University 
of Minnesota; M.S.E., 1957, Ph.D., 1960, 
The Ohio State University

Hansell, T. Stevenson Professor of Education and 
Chair, Department of Teacher Education B.A., 1965, 
Dickinson College; M.Ed., 1970, University 
of Delaware; Ph.D., 1974, University of Virginia

Harbort, Janet McLendon Instructor in English 
B.A., 1994, Cameron University; M.A., 2000, 
Wright State University

Harden, O. Elizabeth Professor Emerita of English 
B.A., 1956, Western Kentucky State University; 
M.A., 1958, Ph.D., 1965, University of Arkansas

Hardman, James Instructor of Mathematics and 
Statistics B.A., 1980, Ohio Wesleyan University; 
M.S., 1995, M.A., 2000, Miami University

Haritos, Mary Lecturer of Modern Languages 
B.A., 1970, University of Illinois-Chicago; M.A., 
1973, University of Illinois-Urbana; Ph.D., 1985, 
Northwestern University-Chicago

Harris, Charlotte M. Assistant Professor 
of Education B.A. 1969, Adelphi University; 
M.Hum. 1991, Wright State University; Ed.D. 
1995, University of Cincinnati

Harris, Samuel T. Associate Professor of Education 
B.S., 1957, St. Paul's College; M.A., 1970, Ed.D., 
1979, University of Denver

Hartmann, Charles J. Professor of Business Law 
A.B., 1959, Washington University; J.D., 1966, 
University of Missouri

Hartrum, Thomas C. Research Assistant Professor 
of Computer Science and Engineering B.E., 1969, 
M.S., 1969, Ph.D., 1973, The Ohio State University; 
M.B.A. 1979 Wright State University

Hartwell, Carolyn L. Assistant Professor of 
Accountancy B.A., 1978, College of Mount St. 
Joseph; M.B.A., 1984, Ph.D., 1992, University of 
Cincinnati; CPA

Harvey, Craig M. Assistant Professor of Biomedical, Industrial, and Human Factors Engineering 
B.I.E., 1985, Georgia Institute of Technology; 
M.S., 1989, Ph.D., 1997, Purdue University

Hawley, John Assistant Professor of Computer Science and Mathematics, WSU—Lake Campus B.S., 1971, Defiance College; M.S., 1974, Wright State University

He, Ping Professor of Biomedical and Human Factors Engineering B.S., 1968, Fudan University (People's Republic of China); M.S., 1981, Ph.D., 1984, Drexel University

Helmens, T. Gregory Assistant Professor of Acting/Musical Theatre B.S., 1985, James Madison University; M.F.A., 1999, University of Cincinnati. College Conservatory of Music

Helms, Ron Associate Professor of Education B.S., 1966, Fairmont State College; M.A., 1968, University of Dayton; Ph.D., 1972, The Ohio State University

Hemsy, Joseph W. Associate Professor Emeritus of Physics B.S., 1958, Missouri School of Mines and Metallurgy; Ph.D., 1966, Purdue University

Henderson, Phyllis A. Associate Professor of Counselor Education B.Mus., 1973, Miami University; M.Ed., 1976, Wright State University; Ed.D., 1982, University of Cincinnati

Henderson, Richard Associate Professor of Physiology and Biophysics B.A., 1965, California State University; M.D., 1969, Duke University

Hennessy, Michael B. Professor of Psychology B.A., 1972, M.A., 1974, Ph.D., 1976, Northern Illinois University

Hereth, Russell H. Associate Professor of Accountancy B.B.A., 1964, University of Cincinnati; M.B.A., 1965, Miami University; CPA

Hess, George G. Associate Professor Emeritus of Chemistry B.S., 1959, Juniata College; Ph.D., 1964, Pennsylvania State University

Hiskey, Robert M. Associate Professor of Biological Sciences, WSU–Lake Campus B.S., 1971, University of Nebraska; M.S., 1973, Florida State University; Ph.D., 1981, University of Nebraska

Ho, Lop-fat Associate Professor of Mathematics and Statistics B.S., 1975, M.Phil., 1977, Chinese University of Hong Kong; Ph.D., 1981, University of Wisconsin at Madison


Holdcraft, Carol A. Assistant Professor of Nursing; Assistant Dean B.S.N., 1971, M.S.N., 1973, University of Cincinnati; D.N.S., 1998, Indiana University

Hong, Lang Professor of Electrical Engineering B.S., 1982, Fuzhou University (China); M.S., 1986, Ph.D., 1989, University of Tennessee

Hopkins, Barbara E. Associate Professor of Economics B.A., 1985, University of California, San Diego; Ph.D., 1992, University of Maryland

Hou, Xiang-Dong Associate Professor of Mathematics and Statistics B.S., 1982, M.S., 1984, University of Science and Technology of China (China); Ph.D., 1990, University of Illinois at Chicago

Hough, Ronald F. Associate Professor Emeritus of Philosophy B.S., 1961, University of Dayton; M.A., 1962, Miami University; Ph.D., 1970, The Ohio State University

Houston, Margaret A. Lecturer of Accountancy B.S.B., 1984, M.B.A., 1985, Wright State University; CPA

Howard, Lillie P. Professor of English; Associate Provost Academic Affairs B.A. 1971, University of South Alabama; M.A., 1972, Ph.D., 1975, University of New Mexico

Huang, Chaoceng Associate Professor of Mathematics and Statistics B.S., 1982, M.S., 1985, Fudan University; Ph.D., 1995, University of Minnesota

Huang, Qingbo Assistant Professor of Mathematics and Statistics B.Sc., 1983, M.Sc., 1986, Xiamen University; Ph.D., 1998, Temple University

Hughes, James M. Professor Emeritus of English; Robert J. Kegerreis Distinguished Professor of Teaching B.A., 1961, Harvard University; M.A., 1962, Ph.D., 1969, University of Pennsylvania

Hull, Barbara Professor of Biological Sciences A.B., 1971, Smith College; Ph.D., 1976, University of Colorado


Hutcheson, Jane B. Clinical Instructor of Nursing B.S.N., 1980, M.S. 1982, Wright State University

Hye, Allen E. Professor of German and Danish B.A., 1966, Franklin and Marshall College; M.A., 1967, Middlebury College; Ph.D., 1972, University of Connecticut

Irvine, William B. Associate Professor of Philosophy B.A., 1973, University of Michigan; M.A., 1976, Ph.D., 1980, University of California at Los Angeles

Isac, Larry D. Professor of Biological Sciences B.S., 1972, M.S., 1976, Virginia Commonwealth University; Ph.D., 1979, University of Maryland

Islam, A. K. M. Aminul Professor of Anthropology B.A., 1952, M.A., 1954, University of Dacca (Pakistan); M.A., 1961, University of London (England); M.A., 1964, University of Toronto (Canada); Ph.D., 1969, McGill University

Ivovich, Dragana Assistant Professor of Psychology A.B., 1988, Vassar College; Ph.D., 1994, University of Southern California
Jagow, Shelley M. Assistant Professor of Music

Jarrell, Howard R. Assistant Professor of Library Administration; Senior Reference Librarian, University Library B.S., 1955, University of Dayton; M.S.L.S., 1958, Case Western Reserve University

Jenkins, Alyce Jean, Jack B.Mus. Ed., 1989, Taiwan

M.S.L.S., Education Communication

John, Jeffrey A. Associate Professor of Communication B.A., 1973, Bowling Green State University; M.A., 1982, Ph.D., 1990, Ohio University


Johnson, Melvin A., Jr. Professor of Physiology and Biophysics B.S., 1950, Central State University; M.S., 1955, Miami University; Ph.D., 1969, Jefferson Medical College

Jones, Mary Ann Associate Professor of Education and Professional Psychology B.S., 1968, M.A., 1973, Ph.D., 1975, University of Illinois

Jung, Burga Associate Professor of Education B.S., 1964, Wittenberg University; M.A., 1987, Concordia University; Ph.D., 1991, The Ohio State University

Kantor, George J. Professor Emeritus of Biological Sciences B.A., 1958, Slippery Rock State College; M.S., 1962, New Mexico Highlands University; Ph.D., 1967, Pennsylvania State University

Kaplan, Alexander Associate Professor of Mathematics and Statistics B.A., 1977, Israel Institute of Technology (Israel); Ph.D., 1986, University of Pennsylvania

Katovic, Vladimir Professor of Chemistry B.S., 1962, M.S., 1963, Ph.D., 1965, University of Zagreb (Yugoslavia)

Kazimierczuk, Marian K. Brage Golding Distinguished Professor of Research, Professor of Electrical Engineering; M.S., 1971, Ph.D., 1978, D.Sci., 1984, Technical University of Warsaw (Poland)

Kefel, Joseph Assistant Professor of Rehabilitation Counseling B.S., 1993, M.R.C., 1994, 1995, Wright State University; Ph.D., 2001, Southern Illinois University at Carbondale

Kerlin, Timothy Instructor of Education
B.V.E., 1987, University of Toledo; M.Ed., 1990, University of Dayton

Ketcha, Daniel M. Associate Professor of Chemistry B.S.C., 1977, King’s College; Ph.D., 1983, Temple University

Khamis, Harry Professor of Mathematics and Statistics and of Community Health; Director, Statistical Consulting Center B.S., 1974, University of Santa Clara; M.S., 1976, Ph.D., 1980, Virginia Polytechnic Institute and State University

Khera, Inder P. Professor of Marketing B.S., 1956, Punjab University (India); B.Tech., 1959, Bombay University (India); M.S., 1962, M.A., 1963, Ph.D., 1968, University of Iowa


Kinateder, Kimberly Associate Professor of Mathematics and Statistics B.A., M.A., 1987, State University of New York at Potsdam; Ph.D., 1990, Michigan State University

King, Cynthia Associate Professor of Classics B.A., 1960, Goucher College; Ph.D., 1969, University of North Carolina

King, Ruth Associate Professor Emerita of Education B.S., 1958, Wayne State University; M.A., 1967, New York University

King, William J. Associate Professor of Classics A.B., 1960, Ph.D., 1970, University of North Carolina

Kirsch, Susan A. Assistant Professor of Biological Sciences B.A., 1989, Mount Holyoke College; Ph.D., 1996, Harvard University


Klaitsner, Beth Lecturer in English B.S., 1989, M.A., 1991, Wright State University

Klein, Helen A. Professor of Psychology B.S., 1964, Michigan State University; M.S., 1967, Ph.D., 1969, University of Pittsburgh

Klein, James Professor of Theatre Arts B.A., 1972, Antioch College


Knapek, Thomas A. Professor Emeritus of Management, WSU–Lake Campus B.S., 1966, University of Dayton; M.B.A., 1968, Ball State University; Ph.D., 1982, Bowling Green State University
Koehn, Thomas Associate Professor Emeritus of Sociology B.A., 1967, University of Houston; M.A., 1970, Texas Christian University; Ph.D., 1974, Michigan State University

Koerber, Robert L. Associate Professor of Pharmacology and Toxicology and Acting Chair B.A., 1965, Kalamazoo College; Ph.D., 1970, Emory University

Koerlin, Ernest F. Associate Professor Emeritus of Art and Art History B.A., 1961, Minneapolis School of Art; M.F.A., 1965, Yale University

Kogut, Maurice D. Professor of Pediatrics and Department Chair B.A., 1951, New York University; M.D., 1955, New York University Bellevue Medical Center

Koube, Richard J. Professor of Biomedical and Human Factors Engineering; Department Chair B.A., 1981, Oral Roberts University; B.A., 1982, Northeastern Illinois University; M.S., 1985, Ph.D., 1987, Purdue University

Kozlowski, Gregory Assistant Professor of Physics M.Sc., 1964, Wrocław University (Poland); Ph.D., 1969, Polish Academy of Sciences; D.Sc., 1975, Wrocław University (Poland)

Kramer, Kenneth F. Associate Professor Emeritus of Geological Sciences B.S., 1961, Rice University; Ph.D., 1967, Florida State University

Kraner, Dan E. Associate Professor of Biological Sciences B.S., 1985, John Carroll University; Ph.D., 1990, The Pennsylvania State University

Kremer, Ronald A. Associate Professor Emeritus of Accountancy, WSU–Lake Campus B.S., 1969, Saint Joseph's College; M.B.A., 1970, Xavier University; CPA

Kruger, Brian M. Associate Professor of Psychology B.A., 1965, Wartburg College; M.A., 1967, Ph.D., 1969, University of Iowa

Kulander, Byron R. Professor of Geological Sciences B.S., 1962, Kent State University; M.S., 1964, Ph.D., 1969, West Virginia University

Kumar, Rishi Professor of Economics; Dean, College of Business and Administration B.A., 1954, University of Delhi (India); M.A., 1970, Vanderbilt University; Ph.D., 1972, Wayne State University

Kuntzman, Andrew J. Associate Professor Emeritus of Anatomy B.S., 1961, M.S., 1963, Ph.D., 1970, The Ohio State University

Kurdek, Lawrence A. Professor of Psychology B.S., 1973, Loyola University; M.A., 1975, Ph.D., 1976, University of Illinois at Chicago

Lafferty, William Associate Professor of Theatre Arts B.S., 1972, M.A., 1977, Purdue University; Ph.D., 1981, Northwestern University

La Forge, Jan Professor of Rehabilitation Counseling B.A., 1976, Northwestern College; M.A., 1977, Ph.D., 1983, University of Michigan

LaForse, Bruce M. Assistant Professor of Classics B.A., 1979, Ithaca College; M.A., 1987, San Francisco State University; M.A., 1989, Ph.D., 1997, University of Texas

Lai, Andrew W. Professor Emeritus of Management Information Systems B.A., 1961, Chung Hsing University (Taiwan); M.A., 1964, University of Alabama; Ph.D., 1974, The Ohio State University

Langley, Albert E. Professor of Pharmacology and Toxicology; Associate Dean for Academic Affairs, School of Medicine B.S., 1967, Waynesburg College; Ph.D., 1974, The Ohio State University

Larkowski, Charles Associate Professor of Music B.Mus., 1971, M.A., 1974, Ph.D., 1977, Michigan State University

Larsen, James E. Associate Professor of Finance B.S.B.A., 1974, M.B.A., 1976, University of Akron; Ph.D., 1987, University of Nebraska

Lauf, Peter K. Professor and Chair of Physiology and Biophysics M.D., 1960, University of Freiburg (Germany)

Knaueir Lavarnway, Pam Associate Professor of Theatre Arts B.F.A., 1980, M.F.A., 1985, Boston University

Law, Joe Associate Professor of English; Coordinator of Writing Across the Curriculum B.A., 1971, Southwestern State College; M.A., 1975, Ph.D., 1983, University of Missouri

Law, Francis Associate Professor of Music; Assistant Department Chair B.Mus., 1965, B.S., 1966, Texas A&M University; M.Ed., 1967, University of Houston

Leach, C. David Associate Professor of Art and Art History B.A., 1968, Bucknell University; M.F.A., 1973, Ohio University

Leffak, Ira M. Professor of Biochemistry and Molecular Biology B.S., 1969, City College of New York; Ph.D., 1976, City University of New York

Lester, Linda K. Lecturer of Mathematics and Statistics B.S., 1971, Central Michigan University; M.A.T., 1990, Oakland University

Leung, Jackson Coordinator of Keyboard Studies Diploma, 1981, Hong Kong Baptist College; M.M., 1984, Temple University; D.M.A., 1990, University of Cincinnati, College Conservatory of Music

Lies, Junghsen Associate Professor of Mechanical Engineering B.S., 1977, National Taiwan University (Taiwan); M.S., 1986, Ph.D., 1990, Clemson University

Lightle, Susan S. Associate Professor of Accounting B.A., 1976, Denison University; M.B.A., 1984, Wright State University; Ph.D., 1992, University of Cincinnati; CPA, CIA

Limouze, Henry Associate Professor of English; Chair, Department of English Language and Literatures B.A., 1972, Oberlin College; M.A., 1975, Ph.D., 1976, The Johns Hopkins University
Lin, P. Paul Assistant Professor of Accounting  
B.S., 1977, M.S., 1979, National Cheng Kung University; Ph.D., 1988, Louisiana State University  
Lipp, Beth Associate Professor of Nursing B.S.N., 1983, Wright State University; M.S.N., 1985, Ph.D., 1992, The Ohio State University  
Listerman, Thomas W. Associate Professor Emeritus of Physics B.S., 1959, Xavier University; M.S., 1962, Ph.D., 1965, Ohio University  
Lockhart, Paul D. Associate Professor of History B.A., State University of New York at Potsdam; M.A., 1986, Ph.D., 1989, Purdue University  
Loi, Phan Associate Professor of Mathematics and Statistics B.S., 1984, University of Scranton; Ph.D., 1988, The Pennsylvania State University  
Loranger, Carol S. Associate Professor of English B.A., 1982, M.A., 1988, University of Nevada-Reno; Ph.D., 1992, University of Colorado, Boulder  
Lowrey, Kenneth Lecturer of Geography B.S., 1968, Memphis State University; M.S., 1988, Southern Illinois University at Edwardsville; A.B.D., University of Cincinnati  
Lu, Guozhen Associate Professor of Mathematics and Statistics B.S., 1983, Hangzhou University, (China); Ph.D., 1991, Rutgers University  
Lu, Luo Professor of Physiology and Biophysics M.D., 1983, Shanghai Medical School (China); Ph.D., 1988, University of Minnesota  
Luehrmann, Laura M. Assistant Professor of Political Science B.A., 1992, University of Dayton; M.A., 1995, Ph.D., 1999, The Ohio State University  
Lumpkin, Joan B. Lecturer of Management Information Systems B.S., 1968, M.B.A., 1976, University of Dayton  
Lunsford, Suzanne Assistant Professor of Chemistry B.S., 1990, Xavier University; Ph.D., 1995, University of Cincinnati  
Mack, Nancy Associate Professor of English B.S., 1970, Bowling Green State University; M.A., 1976, Ph.D., 1986, The Ohio State University  
Macleod, Alex Assistant Professor of English B.A., 1990 University of Dundee (Scotland); B.A., 1991, M.A., 1993, Ph.D., 2001, University of Arizona  
Makkar, Jagdish Associate Clinical Professor of Surgery M.D., 1958, Seth G.S. Medical College (India)  
Mamrack, Mark Associate Professor of Biological Sciences B.S., 1972, Purdue University; Ph.D., 1978, Baylor College of Medicine  
Maner, Martin Professor of English B.A., 1968, Occidental College; M.A., 1972, Ph.D., 1975, University of Virginia  
Maneri, Carl C. Associate Professor Emeritus of Mathematics and Statistics B.S., 1954, Case Institute of Technology; Ph.D., 1959, The Ohio State University  
Mann, Barbara L. Professor of Statistics A.B., 1962, University of Tennessee; M.S., 1965, Tulane University; M.S., 1974, Ph.D., 1979, Virginia Polytechnic Institute and State University  
Martin, John S. Professor Emeritus of Physics B.S., 1950, M.S., 1952, University of Natal (South Africa); D.Phil., 1957, Oxford University  
Martin, Patricia A. Professor of Nursing: Dean B.S.N., 1971, University of Cincinnati; M.S., 1980, Wright State University; Ph.D., 1988, Case Western Reserve University  
Mateti, Prabhaker Associate Professor of Computer Science and Engineering B.E., 1969, Regional Engineering College, Osmania University (India); M.Tech., 1972, Indian Institute of Technology; Ph.D., 1976, University of Illinois  
Mathews, Susann M. Associate Professor of Education and of Mathematics and Statistics B.A., 1974, Meredith College; M.A., 1987, University of New Mexico; M.S., 1989, University of Cincinnati; Ph.D., 1994, The Ohio State University  
Mathies, Bonnie K. Professor of Education: Associate Dean, Technology and Communication B.Ed., 1964, M.Ed., 1968, Ph.D., 1976, University of Toledo  
Mazy, Mary Ellen Professor of Urban Affairs and Geography: Dean, College of Liberal Arts B.A., 1970, M.A., 1972, West Virginia University; Ph.D., 1977, University of Cincinnati  
McCormick, William S. Professor Emeritus of Electrical Engineering B.S.E.E., 1961, Marquette University; M.S., 1963, Ph.D., 1967, University of Wisconsin  
McDermott, Roger D. Associate Professor of Chemistry WSU–Lake Campus B.A., 1962, Ohio Wesleyan University; M.S., 1965, Ph.D., 1968, Purdue University  
McDowell, Gerald L. Associate Professor Emeritus of Art and Art History B.A., 1965, M.A., 1966, University of California at Berkeley  
McDowell, W. Stuart Associate Professor of Theatre Arts; Chair B.A., 1969, Macalester College; M.A., 1974, Ph.D., 1994, University of California, Berkeley
McGowin, Audrey E. Associate Professor of Chemistry B.S., 1985, Emporia State University; M.S., 1989, Ph.D., 1991, University of Missouri–Columbia

McIntyre, Linda Assistant Professor of Teacher Education B.S. 1975. St. Mary’s Dominican College; M.Ed. 1985, Tulane University; Ed.D. 1999, Washington State University

Mckee, Terry Professor of Mathematics and Statistics and Computer Science B.A., 1968, University of Nebraska; M.A., 1970, Ph.D., 1974, University of Wisconsin

McLellan, Marjorie Assistant Professor of History: Public History Program Director B.A., 1976, Miami University, Oxford; M.A., 1981, State University of New York at Oneonta; Ph.D., 1991, University of Minnesota–Minneapolis

Mechlin, Katherine A. Assistant Professor of Physiology and Biophysics B.S., 1969, M.S., 1972, The Ohio State University

Meike, Gerald Associate Professor Emeritus of Mathematics and Statistics B.S., 1952, Aquinas College; M.A., 1954, University of Detroit; Ph.D., 1969, University of Michigan

Melko, Matthew Professor Emeritus of Sociology B.A., 1951, Alfred University; M.A., 1952, University of Chicago; M.S., 1955, Columbia Graduate School of Journalism; Ph.D., 1959, London School of Economics and Political Science (England)

Melton, Edgar Associate Professor of History B.A., 1971, University of North Carolina; Ph.D., 1984, Columbia University

Menart, James A. Assistant Professor of Mechanical Engineering B.S., 1984, University of North Dakota; M.S., 1988, University of Illinois; Ph.D., 1996, University of Minnesota

Mercer, Richard Associate Professor of Mathematics and Statistics B.S., 1973, The Ohio State University; Ph.D., 1980, University of Washington


Meyer, Kathryn Assistant Professor of History B.A., 1969, University of Vermont; Ph.D., 1985, Temple University

Miller, Corey E. Assistant Professor of Psychology B.A., 1994, The University of Texas at Austin; M.A., 1996, Ph.D., 2000, The University of Akron

Miller, David F. Professor of Mathematics and Statistics B.A., 1968, University of Louisville; M.S., 1976, Ph.D., 1979, University of Kentucky

Miller, Mill Associate Professor of Biological Sciences B.A., 1980, Wake Forest University; Ph.D., 1986, Tulane University

Milligan, Barry Associate Professor of English B.A., 1986, University of Colorado; M.A., 1988, Ph.D., 1992, Duke University

Misra, Pradeep Associate Professor of Electrical Engineering; Adjunct Assistant Professor of Electrical and Computer Engineering, Concordia University (Canada) B.Tech., 1983, Indian Institute of Technology (India); Ph.D., 1987, Concordia University (Canada)

Moodeman, Gail R., Assistant Professor of Nursing B.S.N., 1979, M.S., 1983, Wright State University; Ph.D., 2000, University of Kentucky


Molitierno, Arthur A. Associate Professor of English, WSU–Lake Campus B.A. 1964, Villanova University; M.A., 1966, University of Dayton

Moore, Perry D. Professor of Political Science, Provost B.A., 1968, M.A., 1969, Midwestern University; Ph.D., 1974, University of Texas at Austin

Morgan, Carol Assistant Professor of Communication B.S., 1990, University of Illinois; M.A., 1993, Northern Illinois University; Ph.D., 1996, University of Nebraska

Mukhopadhyay, Sharmila M. Associate Professor of Materials Science and Engineering B.S., 1983, Indian Institute of Technology; M.S., 1986, Ph.D., 1989, Cornell University

Must, Raymond I. Associate Professor Emeritus of Art and Art History B.A., 1950, University of Michigan; M.A., 1951, The Ohio State University

Myadze, Theresa I. Associate Professor of Social Work B.S., 1975, University of Illinois; M.S.W., 1977, University of Michigan; Ph.D., 1990, University of Wisconsin

Nagy, Allen L. Professor of Psychology B.S., 1969, M.S., 1971, Ph.D., 1974, Michigan State University

Nagy, Frank Associate Professor of Anatomy: Director, Anatomical Gift Program B.A., 1962, Case Western Reserve University; M.A., 1965, State University of New York at Buffalo; Ph.D., 1969, State University of New York Upstate Medical Center

Narayanan, S. Associate Professor of Biomedical and Human Factors Engineering B.S.M.E., 1987, Regional Institute of Technology at Jamshedpur (India); M.S.I.E., 1988, University of Alabama; Ph.D., 1994, Georgia Institute of Technology

Nathanson, Carol A. Associate Professor of Art History A.B., 1966, Mount Holyoke College; Ph.D., 1973, The Johns Hopkins University

Nehring, Virginia Associate Professor of Nursing B.S.N., 1970, University of Bridgeport; M.S.N., 1972, Yale University; Ph.D., 1980, Walden University
Nelson, Sharon Associate Professor of Music; Associate Dean, College of Liberal Arts B.M., 1968, University of Cincinnati. College Conservatory of Music; M.M., 1981, Wright State University; D.M.E., 1988, University of Cincinnati, College Conservatory of Music

Nester, Robert Assistant Professor of Nursing B.S.N., 1981, Loretto Heights College; M.P.H., 1985, University of Texas; Ph.D., 1999, University of Cincinnati

Nieder, Gary Associate Professor of Anatomy B.S., 1977, Pennsylvania State University; Ph.D., 1981, University of Pittsburgh

Nord, Douglas C. Professor of Political Science B.A., 1974, University of Redlands; M.A., 1976, Ph.D., 1979, Duke University

Norris, Billy E. Associate Professor Emeritus of Biological Sciences, WSU–Lake Campus B.S., 1960, M.S., 1965, Ed.D., 1970, Ball State University

Nussbaum, Noel S. Associate Professor of Physiology and Biophysics B.S., 1956, Brooklyn College of the City University of New York; M.A., 1958, Williams College; Ph.D., 1964, Yale University

O’Brien, Barbara S. Associate Professor of Nursing; Associate Dean for Academic Affairs, College of Nursing B.S.N., 1968, University of Michigan; M.S.N., 1976, University of Cincinnati; Ph.D., 1992, The Ohio State University

O’Brien, Mari Helene Associate Professor of French B.A., 1978, University of Iowa; M.A., 1980, Ph.D., 1991, University of North Carolina at Chapel Hill

O’Connor, Richele Assistant Professor of Education B.S., 1981, M.Ed., 1982, Edinboro University of Pennsylvania; PhD., 1996, The Ohio State University

Olson, James Edwin Professor of Emergency Medicine and of Physiology and Biophysics B.S., 1978, University of California at Berkeley; Postdoctoral, 1978–81, Stanford University School of Medicine

Olson, Marus Assistant Professor of Theatre Arts B.A., 1979, Amherst College; M.A., 1996, Miami University

Olson, Paulette I. Associate Professor of Economics B.A., 1983, California State University; Ph.D., 1989, University of Utah

Orenstein, David Associate Professor of Sociology and Communication; Director, Applied Behavioral Science Program A.B., 1972, Temple University; M.A., 1974, Ph.D., 1978, The Ohio State University

Organisciak, Daniel T. Professor of Biochemistry and Molecular Biology; Department Chair; B.A., 1967, Buffalo State Teachers College; M.S., 1969, Ph.D., 1972, State University of New York at Buffalo

Ortiz, L. Tony Lecturer; Director of Athletic Training B.S., 1978, M.Ed., 1980, Bowling Green State University

Osborne, Evan W. Associate Professor of Economics B.A., 1986, University of Texas–Austin; M.A., 1989, Ph.D., 1993, University of California–Los Angeles

Oshiro, Kenji K. Professor of Geography B.S., 1961, Utah State University; M.A., 1965, Ph.D., 1972, University of Washington


Ovington, June Associate Professor of Education and Chair of Educational Leadership B.S., 1970, M.Ed., 1977, Ph.D., 1980, Kent State University

Owen, Crystal L. Professor and Chair of Management B.A., 1979, M.A., 1987, Ph.D., 1987, The Ohio State University, SPHR

Owen, Luisa Lang Associate Professor Emerita of Art Education B.S., 1970, M.Ed., 1971, Wright State University; Ph.D., 1980, The Ohio State University

Oxindine, Annette Associate Professor of English B.A., 1982, Frostburg State University; M.A., 1985, West Virginia University; Ph.D., 1992, University of Maryland

Pacernick, Gary B. Professor of English B.A., 1963, University of Michigan; M.A., 1966, University of Minnesota; Ph.D., 1969, Arizona State University

Paietta, John Associate Professor of Biochemistry and Molecular Biology B.S., 1975, Washington State University; M.S., 1977, Ph.D., 1982, University of Illinois–Urbana

Pammer, William J., Jr. Professor of Urban Affairs; Director, Master’s of Urban Administration B.A., 1979, State University of New York at Stony Brook; M.A., 1981, University of Akron; Ph.D., 1986, University of Oklahoma

Park, Penny S. Assistant Professor of Art and Art History B.A., B.F.A., 1991, Wright State University; M.F.A., 1993, Boston University

Park, Won Joon Professor Emeritus of Statistics B.S., 1957, Seoul National University (Korea); M.A., 1966, University of California; Ph.D., 1969, University of Minnesota

Paul, Randall S. Assistant Professor of Music B.S., 1979, Jacksonville State University; M.M., 1981, Ithaca College; D.M.A., 2001, University of Oklahoma


Pearson, John C. Associate Professor of Anatomy B.S., 1974, Muskingum College; Ph.D., 1978, West Virginia University School of Medicine
Pedersen, Steen  Professor and Chair of Mathematics and Statistics  Ph.D., 1982, Aarhus University (Denmark)

Peoples, James B.  Associate Professor of Surgery; Chair, Department of Acting and Marshall College; M.D., 1971, New York University School of Medicine

Perks, Manley  Professor of Mathematics and Statistics, Chair B.Sc. (Hons.), 1971, University of the Witwatersrand (South Africa); M.S., 1972, Ph.D., 1977, University of Michigan

Petterman, David A.  Associate Professor of Spanish  B.A., 1970, Illinois Wesleyan University; M.A., 1976, Ph.D., 1984, University of Iowa


Phillips, Chandler  A.  Professor of Biomedical and Human Factors Engineering  A.B., 1965, Stanford University; M.D., 1969, University of Southern California; P.E., 1974, Sacramento State College

Ping, Robert  Associate Professor of Marketing  B.S., 1964, Pennsylvania State University; M.S., 1966, University of Kentucky; M.B.A., 1987, Ph.D., 1990, University of Cincinnati

Pittner, Samuel  Professor and Chair of Neurology: Department Chair B.A., 1953, M.D., 1956, University of Tennessee

Pittman, Alexander  Adjunct Assistant Professor of Library and Communication Science and Modern Languages, WSU-Lake Campus; Librarian, WSU-Lake Campus B.S., 1972, M.A., 1974, Bowling Green State University; M.L.S., 1979, University of Kentucky

Pohlman, Roberta  Associate Professor of Biological Sciences  B.S., 1973, M.Ed., 1978, University of Cincinnati; Ph.D., 1982, The Ohio State University


Povner, Raenell  Clinical Instructor of Nursing  B.S.N., 1992, University of Toledo; M.S., 1996, Wright State University

Prager, Susan  Professor of Nursing  B.A., 1970, Colorado State University; M.S., 1973, New York Medical College; Ed.D., 1980, University of Northern Colorado

Prumus, Robert  Professor of Economics  B.S., 1963, Bob Jones University; M.A., 1967, Ohio University; Ph.D., 1974, Lehigh University

Pringle, Drew D.  Associate Professor and Chair of Health and Physical Education  B.S., 1978, Ball State University; M.S., 1981, Ed.D., 1990, University of Kentucky

Pringle, Mary B.  Professor of English  B.A., 1964, M.A., 1967, University of Denver; Ph.D., 1976, University of Minnesota

Prochaska, Lawrence J.  Professor of Biochemistry and Molecular Biology  B.S., 1971, Illinois State University; Ph.D., 1975, The Ohio State University

Pruett, Robert  Professor of Communication; Program Coordinator, Social and Industrial Communication  B.S., 1959, University of Notre Dame; M.A., 1962, Northern Illinois University; Ph.D., 1970, Bowling Green State University

Pujara, L. Rai  Professor of Electrical Engineering  B.S., 1959, Delhi University (India); M.S., 1967, Ph.D., 1971, The Ohio State University

Putnam, Robert W.  Associate Professor of Physiology and Biophysics  B.S., 1973, Brown University; Ph.D., 1978, University of California at Los Angeles

Quack, Francis K. H.  Associate Professor of Computer Science and Engineering  B.S.E., 1984, M.S.E., 1984, Ph.D., 1990, University of Michigan

Rafferty, Timothy J.  Assistant Professor of Education  B.S., 1972, Kent State University; B.S., 1974, The Ohio State University; M.S., 1982, Ph.D., 1995, University of Dayton

Ramey, Linda  Associate Professor of Education Teaching Certification (KS and OH), A.B., 1983, M.A., 1986, College of Mt. St. Joseph; M.S., 1990, Wright State University; Ph.D., 1993, Kansas State University

Ratnaparkhi, Makarand V.  Professor of Mathematics and Statistics  B.S., 1955, B.S., 1956, M.S., 1958, M.S., 1962, University of Poona (India); Ph.D., 1975, Pennsylvania State University

Rattan, Kuldip S.  Professor of Electrical Engineering and Computer Engineering  B.S., 1969, Punjab Engineering College (India); M.S.E.E., 1972, Ph.D., 1975, University of Kentucky


Raymer, Michael L.  Assistant Professor of Computer Science and Engineering  B.S., 1991, Colorado State University; M.S., 1995, Ph.D., 2000, Michigan State University

Rea, Robert S.  Lecturer of Computer Science and Engineering  B.S.E., 1964, University of Michigan; Ph.D., 1971, University of Virgina

Ream, Larry J.  Associate Professor of Anatomy  B.S., 1967, Elizabethtown College; Ph.D., 1976, University of Kansas
Reece, Robert D. Professor of Community Health and of Religion; Chair, Department of Community Health B.A., 1961, Baylor University; B.D., 1964, Southern Baptist Theological Seminary; M.A., 1966, M.Phil, 1968, Ph.D., 1969, Yale University

Reichert, Julia Professor of Theatre Arts B.A., 1970, Antioch College

Renas, Stephen M. Professor of Economics A.B., 1968, M.A., 1969, Ph.D., 1971, Georgia State University

Renick, Patricia R. Associate Professor of Education A.A., 1968, Stephens College; B.S., 1974, M.S., 1975, Miami University; Ph.D., 1996, Miami University

Reo, Nicholas V. Associate Professor of Biochemistry and Molecular Biology B.A., 1978, Rutgers University; M.S., 1981, Ph.D., 1983, University of Massachusetts

Reynolds, David B. Associate Professor of Biomedical and Human Factors Engineering B.S., 1971, M.S., 1972, Ph.D., 1978, University of Virginia


Rickert, William E. Professor of Communication: Associate Provost B.S., 1968, Illinois Wesleyan University; M.A., 1971, Central Michigan University; Ph.D., 1974, University of Michigan

Rife, Ronald E. Assistant Professor Emeritus of Mathematics, WSU–Lake Campus B.S., 1967, Manchester College; M.S., 1969, Michigan State University

Riordan, Robert V. Professor of Anthropology; University Professor; Chair, Department of Sociology and Anthropology B.A., 1968, Colgate University; Ph.D., 1975, Southern Illinois University

Ritzi, Robert J. Associate Professor of Geological Sciences B.A., 1981, Wittenberg University; M.S., 1983, Wright State University; Ph.D., 1989, University of Arizona

Ritzler, Lisa R. Instructor of Management B.S., 1981, Wright State University; M.S.A., 1988, Central Michigan University

Rizki, Mateen M. Associate Professor of Computer Science and Engineering B.S., 1981, University of Michigan; M.S., 1982, Ph.D., 1985, Wayne State University

Rodriguez, Jon Associate Professor of Dance

Rogers, Marita Assistant Professor of Social Work B.S., 1972, University of Puerto Rico; B.A., 1982, Wright State University; M.S.W., 1989, University of Louisville; Ph.D., 2000, The Ohio State University

Rosencrans, Mary Ann Clinical Assistant Professor of Nursing B.S.N., 1988, Wright State University; M.S.N., 1990, Indiana University

Rothrock, Ling Assistant Professor of Biomedical, Industrial, and Human Factors Engineering B.S., 1990, Florida Institute of Technology; M.S., 1992, Ph.D., 1995, Georgia Institute of Technology

Rowley, Blair A. Professor of Biomedical and Human Factors Engineering B.S.E.E., 1962, Missouri School of Mines and Metallurgy; M.S.E.E., 1963, Ph.D., 1970, University of Missouri

Rubin, Robert Lecturer in English B.A., 1990, Indiana State University; M.A., 1993, Wright State University

Rucker, Mary L. Assistant Professor of Communication B.A., 1987, Delaware State University; M.A., 1990, University of Akron; Ph.D., 2000, Purdue University

Ruminski, Henry J. Assistant Professor of Communication B.S.J., 1964, M.S., 1968, Ph.D., 1972, Ohio University

Runkle, James R. Professor of Biological Sciences B.A., 1973, Ohio Wesleyan University; Ph.D., 1979, Cornell University

Rusch, Tracy Assistant Professor of Mathematics Education B.S., 1982, Boston University; MA., 1992, California State University; Ph.D., 1997, University of Texas

Russell, Anne C. Clinical Instructor of Nursing B.S.N., 1986, Xavier University; M.S.N., 1987, University of Pennsylvania

Rutter, Edgar A. Professor of Mathematics and Statistics; Frederick A. White Distinguished Professor of Service B.A., 1959, Marietta College; Ph.D., 1965, Iowa State University

Ryan, Charles Professor of Education; Director of Graduate Education, College of Education and Human Services B.S., 1959, Slippery Rock State University; M.A., 1961, Colgate University; Ph.D., 1966, University of Toledo

Sadowski, Denise Clinical Instructor of Nursing B.S.N., 1980, Bowling Green University; M.S.N., 1984, University of Cincinnati

Sammons, Martha C. Professor of English B.A., 1971, Wheaton College; Ph.D., 1974, University of North Carolina

Sanders, Nadia R. Professor of Logistics B.S., 1978, Franklin University; M.B.A., 1981, Ph.D., 1986, The Ohio State University

Saunders, Paula M. Professor of Marketing B.A., 1965, Wilmington College; M.Ed., 1974, Wright State University; Ph.D., 1979, Miami University


Rubin, Robert Lecturer in English B.A., 1990, Indiana State University; M.A., 1993, Wright State University
Sayer, James E. Professor Emeritus of Sociology B.S., 1963, Murray State University; M.A., 1969, Ph.D., 1971, University State University


Sayer, James E. Professor of Communication and Department Chair B.S.Ed., 1968, Northern Arizona University; M.A., 1969, University of Arizona; Ph.D., 1974, Bowling Green State University

Schaeff, Patricia University; Ph.D., 1979, University of Cincinnati; M.A., 1988, Miami University

Schaff, Patricia Instructor of Finance B.S., 1981, Wright State University; M.B.A., 1983, Miami University

Schaeffer, Donna M. Associate Professor of Political Science and Chair B.A., 1977, Miami University; M.A., 1984, University of Redlands; Ph.D., 1987, University of Mississippi, SPHR

Schlagheck, Donna M. Professor of Political Science and Chair B.A., 1979, Ph.D., 1985, University of Minnesota


Schneider, Tamera R. Assistant Professor of Psychology B.S., 1989, M.A., 1992, Wright State University; M.A., 1994, Ph.D., 1997, State University of New York at Stony Brook

Schossler, Robert H. Assistant Professor of Dermatology and Pathology B.A., 1966, Centre College of Kentucky; M.D., 1970, University of Louisville School of Medicine

Schroeter, Arnold L. Professor of Dermatology and Chair B.A., 1958, Southwestern at Memphis; M.D., 1961, University of Tennessee


Schwartz, James M. Associate Professor of English, WSU–Lake Campus B.S., 1971, M.A., 1975, Ph.D., 1977, Ohio University

Scordo, Kristine Associate Professor of Nursing B.S.N., 1979, University of Cincinnati; M.S., 1980, Ph.D., 1990, The Ohio State University

Scott, Jane N. Associate Professor and Chair of Anatomy A.B., 1966, Transylvania University; M.S., 1968, Ph.D., 1971, University of Kentucky

Seitz, David Assistant Professor of English B.A., 1984, Brandeis University; M.A., 1988, University of Michigan–Ann Arbor; Ph.D., 1998, University of Illinois at Chicago

Self, Eileen F. Assistant Professor of Education B.S., 1971, University of Tampa; M.Ed., 1972, Ph.D., 1976, University of Mississippi

Seoh, Munsup Professor of Statistics B.S., 1970, Sogang University (Korea); M.S., 1979, Ph.D., 1983, Indiana University

Servé, M. Paul Professor of Chemistry and Chair B.S., 1961, Ph.D., 1965, University of Notre Dame

Shybold, Paul G. Professor and Chair of Chemistry B. Engr. Physics, 1960, Cornell University; Ph.D., 1968, Harvard University

Shalini, Valerie Assistant Professor of Psychology B.S., 1978, University of California at Los Angeles; M.S., 1983, Ph.D., 1987, University of Pittsburgh

Sharma, Alpana Assistant Professor of English B.A., 1980, M.A., 1982, University of Delhi; Ph.D., 1990, University of Pittsburgh

Shaw, Arnab K. Professor of Electrical Engineering B.S., 1979, Jadavpur University (India); M.S., 1983, Villanova University; Ph.D., 1987, University of Rhode Island

Shebilske, Wayne L. Professor and Chair of Psychology B.A., 1969, M.S., 1972, Ph.D., 1974, University of Wisconsin

Shenoi, Belle A. Professor of Electrical Engineering; Honorary Professor, Department of Electrical Engineering, National Chen-Kung University (Taiwan) B.Sc., 1951, University of Madras (India); D.I.I.Sc., 1955, Indian Institute of Science (India); M.S., 1958, Ph.D., 1962, University of Illinois

Shelpak, Norma J. Associate Professor of Sociology B.A., 1974, M.A., 1979, Ph.D., 1981, Indiana University

Sherman, John W. Associate Professor of History; Director of History Graduate Program B.A., 1983, Baylor University; M.A., 1989, University of Toledo; Ph.D., 1994, University of Arizona

Shupe, Lewis K. Professor Emeritus of Education and Communication B.S., 1957, M.S., 1960, University of Utah; Ph.D., 1968, State University of New York at Buffalo

Siegal, Harvey A. Professor of Sociology and Anthropology and of Community Health: Director, Substance Abuse Program B.A., 1967, M.A., 1969, Community College of New York; M.Phil., 1972, Ph.D., 1974, Yale University

Siferd, Raymond E. Professor Emeritus of Electrical Engineering and Computer Engineering B.E.E., 1959, The Ohio State University; M.S., 1963, University of New Mexico; Ph.D., 1977, Air Force Institute of Technology

Silverman, Robert Professor Emeritus of Mathematics B.S., 1951, M.A., 1954, Ph.D., 1958, The Ohio State University
Sincoff, Michael Z. Associate Professor of Management B.A., 1964, M.A., 1966, University of Maryland; Ph.D., 1969, Purdue University
Sirkín, R. Mark Associate Professor of Political Science B.A., 1965, University of Maryland; M.A., 1967, Ph.D., 1971, Pennsylvania State University
Slater, Joseph College; Slilaty, York at Binghamton; M.B.A., 1969, University of New York
Slattery, William Associate Professor of Geological Sciences and Teacher Education B.S., 1986, Jersey City State College; M.A.T., 1988, St. Peter's College; Ph.D., 1993, City University of New York
Sillaty, Daniel Assistant Professor of Mathematics and Statistics B.S., 1993, State University of New York at Binghamton; M.S., 1997, University of Illinois at Urbana—Champaign; Ph.D., 2000, State University of New York at Binghamton
Slonaker, William M. Associate Professor and Chair of Business Law and Management B.S., 1968, M.B.A., 1969, University of Dayton; J.D., 1972, The Ohio State University, SPHR
Snipe, Tracy D. Assistant Professor of Political Science B.A., 1985, University of South Carolina; M.A., 1987, Syracuse University; Ph.D., Indiana State University
Snyder, Carol L. Assistant Professor Emerita of English, WSU—Lake Campus B.S., 1989, Ohio Northern University; M.A., 1970, Bowling Green State University
Spanier, Edward J. Adjunct Associate Professor of Chemistry; Vice President for Business and Finance; Treasurer B.A., 1959, La Salle College; Ph.D., 1964, University of Pennsylvania
Spicer, Karin-Leigh Associate Professor of Communication B.S., 1979, Ohio University; M.A., 1981, Wake Forest University; Ph.D., 1985, Ohio University
Srinivasan, Raghavan Professor of Materials Science and Engineering B.Tech., 1978, Indian Institute of Technology, Madras (India); M.E., 1980, University of Florida; Ph.D., 1983, State University of New York at Stony Brook
Stalter, Ann M. Clinical Instructor of Nursing B.S.N., 1983, M.S., 1994, Wright State University
Steele-Johnson, Debra Associate Professor of Psychology B.A., 1979, University of California at San Diego; Ph.D., 1988, University of Minnesota Steele, Tracey Assistant Professor of Sociology, B.A., 1987, University of Oklahoma; M.A., 1990, University of Oklahoma; Ph.D., 1996, University of Texas
Steinberg, James W. Associate Professor of Sociology, WSU—Lake Campus B.A., B.S., 1974, M.A., 1976, Mankato State University; Ph.D., 1988, Bowling Green State University
Stickney, Frank A. Professor Emeritus of Management B.S., 1951, Boston University; M.B.A., 1955, Air Force Institute of Technology; Ph.D., 1969, The Ohio State University
Stills, Harold F. Professor of Microbiology and Immunology and Director, Laboratory Animal Resources B.S., 1971, Baldwin-Wallace College; D.V.M., 1975, The Ohio State University
Stoez, Willis M. Associate Professor Emeritus of Religion and of Community Medicine B.A., 1955, University of Minnesota; M.Div., 1958, Union Theological Seminary; Ph.D., 1964, Columbia University
Strickland, Kenton Assistant Professor of Geological Sciences, WSU—Lake Campus B.S., 1967, M.S., 1971, Bowling Green State University
Stuckman, Ralph E. Professor Emeritus of Education, WSU—Lake Campus B.S., 1960, Bowling Green State University; M.A., 1963, University of Toledo; Ed.D., 1969, Ball State University
Subban, Jennifer Assistant Professor of Urban Affairs B.S., 1989, University of Natal (South Africa); M.U.R.P., 1994, Ph.D., 1998, University of New Orleans
Sudkamp, Thomas A. Professor of Computer Science and Engineering B.S., 1974, University of Wisconsin at Madison; M.S., 1976, Ph.D., 1978, University of Notre Dame
Sumser, Robert M. Associate Professor of History B.A., 1980, San Jose State University; M.A., 1984, Ph.D., 1989, University of California at Los Angeles
Svobodny, Thomas P. Associate Professor of Mathematics and Statistics B.A., 1979, University of Chicago; Ph.D., 1987, University of Wisconsin at Madison

Swaney, James A. Professor of Economics B.S., 1971, M.S., 1972, Wright State University; Ph.D., 1979, Colorado State University


Swanson, Donald R. M.A., 1955, University of Connecticut: B.A., 1966, Miami University; M.S., 1970, Wright State University; Ph.D., 1971, University of Wisconsin at Madison

Sweeney, Robert J. Director, Center for Economic Education

Sylvester, Roger A. Ph.D. 1977, M.B.A. 1979, Wright State University; Professor of Computer Science and Engineering

Tamburino, Louis A. Ph.D. 1987, Wright State University; Adjunct Research Associate

Tanner, Kenneth B. Instructor of Mathematics and Statistics B.S., 1972, M.S., 1974, University of Kentucky; CMA


Tamburino, Louis A. Adjunct Research Associate Professor of Computer Science B.S., 1957, Carnegie-Mellon University; Ph.D., 1962, University of Pittsburgh

Tanner, Kenneth B. Instructor of Mathematics and Statistics B.S., 1972, M.S., 1974, Wright State University


Taylor, Charles Senn Professor of Philosophy: Chair, Department of Philosophy; Chair, Department of Religion B.A., 1970, Marietta College; Ph.D., 1974, Boston College

Taylor, David L. Voluntary Assistant Professor of Microbiology and Immunology A.B., 1963, Wittenberg University; M.S., 1965, Ph.D., 1968, West Virginia University

Taylor, Nancy Assistant Professor of Music B.M., 1987, Arizona State University; M.M., 1989, Indiana University

Taylor, Ronald F. Lecturer of Computer Science and Engineering A.B., 1967, Wilmington College; M.S., 1971, Wright State University; Ph.D., 1979, University of Dayton


Teter, Martie Clinical Assistant Professor of Nursing B.S., 1968, Edgecliff College; M.S., 1996, Wright State University

Thirunarayan, Krishnaprasad Associate Professor of Computer Science and Engineering B.T., 1982, Indian Institute of Technology (India); M.E., 1984, Indian Institute of Science (India); Ph.D., 1990, State University of New York at Stony Brook

Thobaben, Robert G. Professor Emeritus of Political Science B.S.C., 1948, Ohio University; M.A., 1962, Miami University; Ph.D., 1967, University of Cincinnati

Thomas, Joseph F. Jr. Professor of Mechanical Engineering and Materials Engineering: Dean, School of Graduate Studies; Associate Vice President for Research B.E., 1963, Cornell University; M.S., 1965, Ph.D., 1968, University of Illinois

Thobaben, Robert G. Professor of Mechanical Engineering B.S., 1986, M.S., 1989, Wright State University; Ph.D., 1993, University of Dayton

Tian, Emily M. Assistant Professor of Mathematics and Statistics B.S., 1993, AnHui Normal University; M.S., 2000, Ph.D., 2001, Washington State University

Tierman, Thomas O. Professor Emeritus of Chemistry B.S., 1958, University of Windsor (Canada); M.S., 1960, Ph.D., 1966, Carnegie-Mellon University

Tipps, James Associate Professor of Music and Coordinator of Music Education B.S., 1977, Tennessee Technological University; M.S.T., 1985, Georgia Southern University; Ph.D., 1992, Florida State University

Tomlin, James H. Associate Professor of Education and Biological Sciences B.A., 1976, East Stroudsburg State College; M.S., 1984, East Stroudsburg University; Ed.D., 1994, Temple University

Traylor, Thomas L. Associate Professor and Chair of Economics B.A., 1983, College of St. Thomas; M.S., 1986, Ph.D., 1988, Purdue University

Tsang, Pamela Associate Professor of Psychology A.B., 1977, Mount Holyoke College; M.A., 1979, Ph.D., 1983, University of Illinois

Turchi, John J. Associate Professor of Biochemistry and Molecular Biology B.S., 1985, Creighton University; Ph.D., 1990, University of Missouri

Turnbull, Kenneth Associate Professor of Chemistry B.S., 1973, Ph.D., 1976, Heriot Watt University (Scotland)

Turyn, Larry Associate Professor of Mathematics and Statistics B.S., 1975, Columbia University; M.S., 1977, Ph.D., 1980, Brown University

Van't Hof, Thomas J. Assistant Professor of Biological Sciences B.S., 1980, Stony Brook University; M.S., 1989, Ph.D., 1992, University of Michigan

Vance, James T., Jr. Associate Professor of Mathematics B.S., 1973, North Carolina State University; Ph.D., 1980, University of Wisconsin

Verman, Mark Associate Professor of Religion; Larry and Leonore Zusman Professor of Judaic Studies B.A., 1976, M.A., 1977, University of Toronto; A.M., 1982, Ph.D., 1984, Harvard University

Vice, Roy L. Associate Professor of History B.A., 1972, Carson-Newman College; M.A., 1976, Ph.D., 1984, University of Chicago

Vito, Kimberly Associate Professor of Art and Art History B.F.A., 1986, Miami University; M.F.A., 1988, Florida State University

Voss, Daniel Professor of Mathematics and Statistics B.S., 1979, University of Dayton; M.S., 1981, Ph.D., 1984, The Ohio State University

Wachtel, Harvey M. Assistant Professor and Chair of History; Director, Graduate Studies in History B.A., 1961, Brooklyn College; M.A., 1963, Ph.D., 1971, University of Missouri


Wagner, Lawrence Instructor of Business, WSU-Lake Campus B.S., 1963, Commerce Rider College; M.B.A., 1976, University of Chicago

Wagner Williams, Carol Associate Professor of Rehabilitation Counseling B.S., 1972, University of Wisconsin; M.R.C., 1976, Bowling Green State University; M.A., 1986, Ph.D., 1993, The Ohio State University

Walker, James L. Professor of Political Science B.A., 1963, University of Santa Clara; M.A., 1964, Ph.D., 1974, University of California at Berkeley

Walker, Suzanne Associate Professor of Dance

Wang, Bin Assistant Professor of Computer Science and Engineering B.S.E., 1992, Zhejiang University; M.S., 1994, University of Louisville; Ph.D., 2000, The Ohio State University

Wang, Hong Assistant Professor of Management Information Systems B.T., 1982, Dalian University of Technology; M.A., 1996, Ph.D., 1998, The Ohio State University

Wang, Weizhen Assistant Professor of Mathematics and Statistics B.S., 1987, M.S., 1990, Peking University; Ph.D., 1995, Cornell University


Warner, Celesta Clinical Instructor of Nursing B.S.N., 1965, University of Michigan; M.S., 1984, Ball State University

Warrick, Kimberly J. Associate Professor of Music B.Mus., 1980, California State University Northridge; M.M., 1992, D.A., 1995, University of Northern Colorado

Watamaniuk, Scott Associate Professor of Psychology B.S., 1985, University of Alberta; M.S., 1987, Ph.D. 1990, Northwestern University

Watson, Frederick R. Assistant Professor of Management Science B.S., 1979, South Dakota School of Mines and Technology; M.B.A., 1991, University of Dayton; Ph.D., 1996, University of Cincinnati

Watts, Doyle R. Assistant Professor of Geological Sciences B.S., 1972, M.S., 1975, The Ohio State University; Ph.D., 1979, University of Michigan


Weber, Daniel L. Associate Professor of Psychology A.B., 1973, Oberlin College; Ph.D., 1977, Harvard University

Weber, Robert J. Associate Professor and Chair of Physical Medicine and Rehabilitation B.S., 1967, M.D., 1971, The Ohio State University

Weinstein, Larry B. Assistant Professor of Management Science B.S., 1985, University of Cincinnati; M.S., 1988, G.M.I. Engineering and Management Institute; Ph.D., 1996, University of Kentucky

Weisman, Robert A. Professor of Biochemistry and Molecular Biology; Associate Dean, College of Science and Mathematics, Associate Dean for Biomedical Sciences, School of Medicine B.S., 1958, Union University; Ph.D., 1963, Massachusetts Institute of Technology


Wendt, Ann C. Associate Professor of Management B.S., 1977, M.S., 1980, Ph.D., 1987, University of Utah, SPIHR

Wenning, Mary V. Assistant Professor of Urban Affairs B.S.S.W., 1979, M.C.R.P., 1989, Ph.D., 1995, The Ohio State University

Wetter, Eldon J. Assistant Professor Emeritus of Geography, WSU-Lake Campus B.S., 1967, University of Wisconsin at Platteville; M.A., 1969, The Ohio State University

Wichterle, Rene Associate Professor of Physics B.S., 1987, M.S., 1988, Ph.D., 1990, The Ohio State University
Wheatly, Michele G. Professor and Chair of Biological Sciences B.S., 1977; Ph.D., 1980, University of Birmingham (U.K.)

Whitten, Thomas R. Professor Emeritus of English B.A., 1955, Kent State University; M.A., 1963, University of Colorado; Ph.D., 1969, University of Cincinnati

White, Mary Lou Professor Emerita of Education B.S., 1955, University of Wisconsin; Ph.D., 1972, The Ohio State University

White, Patricia K. Associate Professor of Dance B.A., 1969, Manhattanville College; M.A., 1975, University of Illinois


Wilcox, Norma Assistant Professor of Sociology B.A., 1973, University of Arkansas at Little Rock; M.A., 1976, Ph.D., 1983, St. Louis University


Williams, Richard E. Associate Professor of Finance; Associate Dean, College of Business and Administration B.S., 1964, Miami University; M.A., 1965, University of Florida; Ph.D., 1975, Michigan State University

Williams, Scott Assistant Professor of Management B.S., 1991, M.B.A., 1993, Southern Illinois University; Ph.D., 1999, Texas A&M University

Willis, Charles L. Professor Emeritus of Education B.S., 1954, M.S., 1957, Indiana State University; Ed.D., 1964, Indiana University

Winkeljohn, Dorothy R. Associate Professor Emerita of Education B.S., 1964, Saint Joseph's College; M.S., 1969, Syracuse University; Ph.D., 1972, University of Kansas

Wise, Gordon L. Professor Emeritus of Marketing B.S., 1956; M.B.A., 1957, Miami University

Wolfe, John R. Adjunct Assistant Professor of Education, WSU–Lake Campus; Director of Academic and Instructional Services, WSU–Lake Campus A.A., 1975, Donnelly College; B.S., 1976, Benedictine College; M.S., 1978, Kansas State University; Ph.D., 1995, Bowling Green State University

Wolfe, Paul J. Professor and Chair of Geological Sciences B.S., 1960, M.S., 1963, Ph.D., 1966, Case Institute of Technology

Wolff, J. Mitch Associate Professor of Mechanical Engineering B.S., 1983, M.S., 1989, Ph.D., 1995, Purdue University
University Faculty Officers

President of the Faculty
Virginia Nehring

Past Faculty Presidents
James Walker 2000–2001
David L. Barr 1999–2001
James A. Sayer 1997–98
Rudy Fichtenbaum 1996–97
Donna M. Schlagheck 1995–96
James A. Sayer 1994–95
Marguerite G. MacDonald 1993–94
Edgar A. Rutter 1992–93
Gregory Bernardt 1991–92
Rudy Fichtenbaum 1990–91
James E. Sayer 1989–90
Alphonso L. Smith 1988–89
Jeanne Ballantine 1987–88
Richard Williams 1986–87
Robert Dixon 1985–86
Elizabeth Harden 1984–85
James Jacob 1983–84
Charles Hartmann 1982–83
Donald Pabst 1981–82
Lilburn Hoehn 1980–81
James E. Sayer 1979–80
Joseph Castellano 1978–79
Jacob Dorn 1977–78
Glenn Graham 1976–77
Barbara Dreher 1975–76
John Treacy 1974–75
Ira Fritz 1972–74
Lawrence Hussman 1971–72
Emil Kmetec 1968–71

Presiding Officers of Faculty Meetings
Norman Anon 1967–68
Edward Cox 1966–67
Criteria for Ohio Residency

Ohio Board of Regents Rule 3333-1-10

Ohio Student Residency for State Subsidy and Tuition Surcharge Purposes

(A) Intent and Authority
(1) It is the intent of the Ohio Board of Regents in promulgating this rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the State of Ohio primarily for the purpose of receiving the benefit of a state-supported education.

(2) This rule is adopted pursuant to Chapter 119 of the Revised Code, and under the authority conferred upon the Ohio Board of Regents by section 3333.31 of the Revised Code.

(B) Definitions

For the purposes of this rule:

(1) A "resident of Ohio for all other legal purposes" shall mean any person who maintains a twelve-month place of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subject to tax liability under section 5747.02 of the Revised Code, provided such person has not, within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.

(2) "Financial support," as used in this rule, shall not include grants, scholarships, and awards from persons or entities that are not related to the recipient.

(3) An "institution of higher education," as used in this rule, shall mean any university, community college, technical institute or college, general and technical college, medical college, or private medical or dental college that receives a direct subsidy from the state of Ohio.

(4) For the purpose of determining residency for tuition surcharge purposes at Ohio’s state-assisted colleges and universities, "domicile" is a person’s permanent place of abode; there must exist a demonstrated intent to live permanently in Ohio, and a legal ability under federal and state law to reside permanently in the state. For the purpose of this policy, only one domicile may be maintained at a given time.

(5) For the purpose of determining residency for tuition surcharge purposes at Ohio’s state-assisted colleges and universities, an individual’s immigration status will not preclude an individual from obtaining resident status if that individual has the current legal status to remain permanently in the United States.

(C) Residency for Subsidy and Tuition Surcharge Purposes

The following persons shall be classified as residents of the State of Ohio for subsidy and tuition surcharge purposes:

(1) A dependent student, at least one of whose parents or legal guardian has been a resident of the state of Ohio for all other legal purposes for twelve consecutive months or more immediately preceding the enrollment of such student in an institution of higher education.

(2) A person who has been a resident of Ohio for the purpose of this rule for at least twelve consecutive months immediately preceding his or her enrollment in an institution of higher education and who is not receiving, and has not directly or indirectly received in the preceding twelve consecutive months, financial support for persons or entities who are not residents of Ohio for all other legal purposes.

(3) A dependent child of a parent or legal guardian, or the spouse of a person who, as of the first day of a term of enrollment, has accepted full-time, self-sustaining employment and established domicile in the state of Ohio for reasons other than gaining the benefit of favorable tuition rates.

Documentation of full-time employment and domicile shall include both of the following documents:

(a) A sworn statement from the employer or the employer’s representative on the letterhead of the employer or the employer’s representative certifying that the parent or spouse of the student is employed full-time in Ohio.

(b) A copy of the lease under which the parent or spouse is the lessee and occupant of rented residential property in the state; a copy of the closing statement on residential real property located in Ohio of which the parent or spouse is the owner and occupant; or if the parent or spouse is not the lessee or owner of the residence in which he or she has established domicile, a letter from the owner of the residence certifying that the parent or spouse resides at that residence.

(D) Additional criteria that may be considered in determining residency for the purpose may include but are not limited to the following:

(1) Criteria evidencing residency:

(a) If a person is subject to tax liability under section 5747.02 of the Revised Code;

(b) If a person qualifies to vote in Ohio;

(c) If a person is eligible to receive state welfare benefits;

(d) If a person has an Ohio's driver’s license and/or motor vehicle registration.

(2) Criteria evidencing lack of residency:

(a) If a person is a resident of or intends to be a resident of another state or nation for the purpose of tax liability, voting, receipt of welfare benefits, or student loan benefits (if the student qualified for that loan program by being a resident of that state or nation);

(b) If a person is a resident or intends to be a resident of another state or nation for any purpose other than tax liability, voting, or receipt of welfare benefits (see paragraph (D)(2)(a) of this rule).

(E) Exceptions to the general rule of residency for subsidy and tuition surcharge purposes:

(1) A person who is living and is gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who is pursuing a part-time program of instruction at an institution of higher education shall be considered a resident of Ohio for these purposes.

(2) A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person’s domicile.

(3) A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents shall be considered residents of Ohio for these purposes.
(4) A person who is transferred by his or her employer beyond the territorial limits of the fifty states of the United States and the District of Columbia while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile as long as such person has fulfilled his or her tax liability to the state of Ohio for at least the tax year preceding enrollment.

(5) A person who has been employed as a migrant worker in the state of Ohio and his or her dependents shall be considered a resident for these purposes provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment.

(F) Procedures

(1) A dependent person classified as a resident of Ohio for these purposes under the provisions of paragraph (C)(1) of this rule and who is enrolled in an institution of higher education when his or her parents or legal guardian removes their residency from the state of Ohio shall continue to be considered a resident during continuous full-time enrollment and until his or her completion of any one academic degree program.

(2) In considering residency, removal of the student or the student's parents or legal guardian from Ohio shall not, during a period of twelve months following such removal, constitute relinquishment of Ohio residency status otherwise established under paragraph (C)(1) or (C)(2) of this rule.

(3) For students who qualify for residency status under paragraph (C)(3) of this rule, residency status is lost immediately if the employed person upon whom resident student status was based accepts employment and establishes domicile outside Ohio less than twelve months after accepting employment and establishing domicile in Ohio.

(4) Any person once classified as a nonresident, upon the completion of twelve consecutive months of residency, must apply to the institution he or she attends for reclassification as a resident of Ohio for these purposes if such person in fact wants to be reclassified as a resident. Should such person present clear and convincing proof that no part of his or her financial support is or in the preceding twelve consecutive months has been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes, such person shall be reclassified as a resident.

Evidentiary determinations under this rule shall be made by the institution which may require, among other things, the submission of documentation regarding the sources of a student's actual financial support.

(5) Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.

(6) Any institution of higher education charged with reporting student enrollment to the Ohio Board of Regents for state subsidy purposes and assessing the tuition surcharge shall provide individual students with a fair and adequate opportunity to present proof of his or her Ohio residency for purposes of this rule. Such an institution may require the submission of affidavits and other documentary evidence which it may deem necessary to a full and complete determination under this rule.

---

Guidelines for Interpretation and Application of Ohio Board of Regents' Residency Rule 3333-1-10

1. Section (B)(1)
   a. A "twelve-month place or places of residency in Ohio," within the meaning of this section, shall mean the maintenance of living quarters in the state. This may be fulfilled in whole or in part by the rental of a dormitory room. It should not be interpreted so as to require unbroken physical presence in the state, so long as the "place" of residence is maintained. Residency is not lost, therefore, by vacationing out of the state.
   b. A person who is qualified as a resident to vote in Ohio and receive state welfare benefits need only be physically present here for thirty days and have declared himself or herself to be a resident. This should not be interpreted so as to require anyone to actually register to vote or apply for welfare benefits.
   c. Persons who may be subjected to tax liability under Section 5747.02 of the Revised Code are defined in Revised Code 5747.01 as follows:

   -(1) 'Resident' means:
   (1) Any individual who is domiciled in this state;
   (2) Any individual who lives in and maintains a permanent place of abode in this state, and who does not maintain a permanent place of abode elsewhere unless such individual, in the aggregate, lives more than 335 days of the taxable year outside this state."
   The essential reason for this requirement is to insure that persons who do enjoy residency benefits also have such income as they have subjected to Ohio taxation.
   d. A person who has not "declared himself or herself to be or allowed himself or herself to remain" a resident of another state for these and other purposes" shall mean one who does not retain an out-of-state driver's license, automobile registration, or voting residence, or who does not receive such things as loans or scholarships from another state when residency in that state is a prerequisite thereof. Therefore, this total disavowal of residency in another state must be for a full year's time before Ohio residency can be granted under this rule.

2. Section (B)(2)
   The purpose of this section is to assure that persons receiving direct and substantial parental or family support from out of state shall not be allowed Ohio residency. Occasional small gifts that are not a substantial part of a person's maintenance should not disqualify that person from achieving residency. Similarly, the receipt of grants, loans, or scholarships from the federal government, corporations, foundations, or banks that are not simply conduits for family support or from other states when this is not precluded by section (B)(1), should not disqualify a person.

3. Section (B)(5)
   a. Certain immigration visas carry with them the current legal status, by virtue of federal treaties and agreements, to enable the holder to remain in the United States and establish resident status. A student who holds one of these visas can therefore be considered for resident status for tuition surcharge purposes in the same manner as any other student assuming that the requirements specified in section (B)(1) of this rule are met.
b. The determination of the twelve-month residency requirement for an alien admitted for permanent residence, if necessary, shall include any portion, up to twelve months, of the elapsed time between the date of application for adjustment of status to lawful permanent resident and the date of application for residency for these purposes. All other relevant requirements under section (C) of this rule must also be adhered to in making the residency determination.

c. To change his or her immigration status from temporary to permanent, an alien must file INS form I-845. The college or university residency official can obtain the date an application was accepted by INS through an information release form (G-641) signed by the alien. There is also a nominal service fee that must accompany the release form.

d. In instances where, prior to August 10, 1978, aliens, for reasons of quota, have not been permitted to officially file for permanent residency (INS form I-845), but have had their visa preference petition approved by INS, and have been allowed to remain and work in the United States, the residency official may use the INS verified petition approval date to document intent to become a permanent resident. In these cases, the visa preference petition must be filed by the individual seeking Ohio residency, if adult, and not by another party. In the case of minors, the head of the family's application for such minors is acceptable. All other relevant requirements under section (C) of this rule must be adhered to in making the residency determination.

4. Section (C)(1)
The intent of the term “dependent student” is to tie the residency of persons who have never emancipated themselves from their parents to those parents. This connotes a continued, unbroken dependency.

Children who emancipate themselves from parents who are Ohio residents and later return to dependency on those parents may be awarded immediate residency status by providing satisfactory documentation of renewed dependence and evidence of compliance with other pertinent provisions of the rule, including physical presence in the state. “Enrollment” under this section shall commence with the first day of classes at the institution attended.

5. Section (C)(2)
The term “resident” in this section shall mean a person who meets the requirements of section (B)(1).

6. Section (C)(3)
The intent of this provision is to speed up the “residency clock” for family members (i.e., spouse, dependent children) whose domicile follows that of a full-time employed person who has moved into Ohio for employment purposes. Rather than being subject to out-of-state tuition rates for the first twelve months of the employed person’s presence in Ohio, the dependent children and spouse of the full-time employed person are eligible for resident tuition rates immediately—provided that the move to Ohio was not for the purpose of gaining favorable tuition rates, and that appropriate documentation is provided. In accordance with the provisions of section (F)(5) of the rule, residency officers may request such documentation in addition to the materials specifically described in (C)(3) as they deem necessary to conclusively determine employment status and/or domicile.

Also, residency officers may request documentation of application and acceptance dates pertaining to employment and instructional programs as necessary to weigh questions of intent.

7. Section (E)(1)
a. “Gainfully employed,” as used in this section, shall mean engaged in an income-producing occupation. The spouse of the person gainfully employed may also be considered gainfully employed provided he or she is providing full-time services as a homemaker.

b. “Full-time” employment, as used in this section, shall be construed in light of the standards applicable to a given occupation.

c. A “part-time program of instruction” for these purposes is to be defined by an institution as that term is otherwise applied.

8. Section (E)(2)
a. The “United States military service,” as used in this section and in section (E)(3), shall mean persons holding status in the branches of military service, whether performing actual military duty or on assignment elsewhere.

b. “Dependents” under this section and under section (E)(3) shall be limited to members of the immediate family who are in fact dependent on the member of the military for a substantial part of their financial support.

c. Active service of commissioned officers of the Public Health Service shall be deemed to be active military service in the armed forces of the United States for determining residency for tuition purposes.

d. “Domicile,” under this section, shall mean the place a person declares to be his or her home for voting and taxation purposes.

9. Section (E)(4)
“Domicile,” under this section, is to be interpreted in the same manner as (E)(2).

10. Section (E)(5)
a. For purposes of this rule, a migrant is defined as someone who makes or has made his or her livelihood in hiring out to do seasonal work and has traveled interstate for this purpose.

b. The income earned in Ohio shall have been subjected to Ohio taxation.

c. In making a determination under this section, an institution may consider any probative evidence submitted by a person. Any evidence taken may be required to be sworn.

11. Sections (F)(1), (F)(2), and (F)(3)
a. A person’s parents or legal guardian shall be deemed to have removed their residency from Ohio when the person with whom a student resides and upon whom he or she is financially dependent leaves the state with no present intention of returning to residence.

b. An “academic degree program” shall not include the associate degree when the person receiving such degree continues full-time pursuit of a baccalaureate degree.

c. For students who qualify for residency status under (C)(1) or (C)(2), a period of twelve months following removal of the independent student or dependent student’s parents or legal guardian is permitted during which residency is not lost.
d. Students who qualify for residency status under (C)(3) will lose residency status immediately if the employed person upon whom immediate resident student status was based accepts employment and establishes domicile outside Ohio less than twelve months after accepting employment and establishing domicile in Ohio. If the employed person retains Ohio employment and domicile for twelve months or more, the student would qualify for residency under (C)(1) and would retain residency status as described in a., b., and c. above.

12. Section (F)(4)

a. A change in residency status under this section is never automatic, and must be initiated by an application for such change by the person seeking it.

b. "Clear and convincing proof" is that standard of evidence that is beyond mere preponderance, but falling short of the "beyond a reasonable doubt" test. It requires that there exist no substantial evidence, direct or circumstantial, conflicting with that proffered by a person applying for a change in residency status.

c. In making a determination under this section, and institution may consider any probative evidence submitted by a person. It may require, however, submission of only those things which the person himself or herself can secure. Any evidence taken may be required to be sworn.

13. Section (F)(6)

It is incumbent upon a person to apply for a change in residency, and his or her failure to do so as soon as he or she is entitled to a change shall preclude the granting of residency retroactive to that date. A change in residency shall be prospective only from the date such application is received.

14. Section (F)(6)

No person need be afforded the opportunity for personal appearance before the person or body making a determination under this rule; however, any such opportunity that is afforded any one person must be equally granted to others. A person or body making a determination under this section should allow the student an opportunity to submit all documentary evidence that such student wishes in support of a claim of residency, and shall consider all such evidence that is relevant and probative.

Notice to Students

Privacy and Release of Student Educational Record Information

The Family Educational Rights and Privacy Act of 1974 (FERPA) as amended sets forth requirements designed to protect the privacy of student educational records. FERPA governs access to records maintained by educational institutions and the release of information from those records. This abbreviated document is provided as an overview of Wright State University's commitment to protect educational records for both the student and the institution. For additional information, please contact The Office of the Registrar, E244 Student Union, (937) 775-5588, fax (937) 775-5597; e-mail registrar@wright.edu.

Educational Records

Educational records are those records, files, documents, and other materials that contain information directly related to a student and are maintained by the university. Some records maintained are not educational records, such as those:

- by the Office of Public Safety for law enforcement purposes;
- by a physician, psychiatrist, psychologist, or other recognized professional, professional in training, or paraprofessional made, maintained, or used solely for the purpose of treatment or accommodation;
- records exclusively containing information about an individual after he or she is no longer a student.

Students are granted the right to inspect and review all of their educational records, with the exception of the financial records of parents and confidential letters and statements of recommendations covering certain years. Students may waive their right of access to confidential letters and statements of recommendation. Even if the student signs a waiver, upon request, the names of all persons making confidential recommendations will be made available. The university may not require a student to waive his or her right of access for receipt of university benefits or services.

Reviewing Records

Requests to review records must be made separately, in writing, to each office maintaining records. Within 15 days, and not to exceed 30 days, offices will respond to requests to review and inspect. Information contained in educational records will be fully explained and interpreted to students by university personnel.

Students have the right to challenge the content of their education records if they consider the information contained therein to be inaccurate, misleading, or inappropriate. Students challenging information in their records must submit, in writing, a request for a hearing to the director of the appropriate department, school, or college maintaining the record, listing the specific information in question and the reasons for the challenge.

In the event that the hearing panel denies a student's request to change information within his or her record, an appeal may be made. All appeals shall be in writing, and submitted to the Registrar within 10 business days of the hearing decision. In the event that the appeal is denied, the student may choose to place a statement with the record commenting on the accuracy of the information in the record and/or setting forth any basis for inaccuracy. Note: The Schools of Medicine and Professional Psychology have separate procedures for challenging and adjudicating record disputes. Please refer to the individual school's student handbook for more information.

Public Information

Information identified as public information will be released without the student's consent. Public information is defined as the following:

- Student's name*
- All addresses including e-mail*
- Telephone listings*
- Major field of study
- Number of hours registered

*Indicates that the student has the right to request that such information not be released; however, the student's right to request does not limit the university's ability to release the information to the extent the student has signed a release authorization.
• Full– or part-time status
• Class standing (freshman, sophomore, junior, senior, graduate, or professional)
• Dates of attendance
• Degrees awarded and total hours earned
• Special honors and awards
• Most recent previous educational agency or institution attended by the student
• Participation in officially recognized activities and sports
• Weight and height of members of athletic teams

*These items are included in the WSU telephone directory.

Students have the right, however, to have this information withheld from the public if they so desire. Each student who wants information withheld (including items to be published in the student directory) shall complete a “Request to Prevent Release of Public Information” form from the Office of the Registrar. Each student is advised to carefully consider the consequences of a decision to withhold public information (e.g., if a student is named to the dean’s list, the university cannot make that information public). The university will not release information that is requested to be withheld; any requests from persons or organizations outside the university will be refused unless the student provides written consent for the release.

The university receives many inquiries for “directory information” from a variety of sources, including friends, parents, relatives, prospective employers, other institutions of higher education, honor societies, licensing agencies, government agencies, and the news media. The university will not release information that is requested to be withheld; any requests from persons or organizations outside the university will be refused unless the student provides written consent for the release.

The following are examples of when prior consent from a student is not needed. Consequently, the university will release this information in the following instances:

• for requests from Wright State University employees who have a legitimate educational interest on a “need to know” basis;
• in compliance with a lawful subpoena or judicial order (only after an attempt is made to inform the student by the Office of General Counsel);
• for requests in connection with a student’s application for or receipt of financial aid;
• for requests by state authorities and agencies specifically exempted from the prior consent requirement by the Act;
• for information submitted to accrediting organizations;
• for requests by parents of a dependent student, as defined in Section 152 of the Internal Revenue Code of 1954;
• in cases where a student who is under 21 years of age (at the time of notification) has committed a violation of law or university policy pertaining to drugs or alcohol;
• in cases where a student is found responsible for a violation of the university’s Code of Student Conduct pertaining to an act of sexual or physical assault;
• in the case of emergencies where the health, welfare, or safety of the student is in jeopardy;
• to authorized federal officials;
• for information requested by officials of other institutions in which the student intends to enroll.

Note: Each fall quarter, the university publishes the telephone directory, which contains names, home and local addresses, e-mail addresses, and local telephone numbers. To keep information from being printed in the directory, a student must notify the Office of the Registrar (in the manner described above) no later than the first Friday after the start of the fall quarter. Because the directory is published only once a year, requests to change a student’s information release status after the first Friday of fall quarter (or in subsequent quarters), will not be reflected in the printed directory. However, changes will be applied to public information within the student information system.

Equal Opportunity/Affirmative Action Policy

Wright State University is committed to achieving full equal opportunity in all aspects of university life. We are proud of the diversity of the university community and strive to make all members of the community feel welcome.

The policy of Wright State University is to not discriminate against any persons on the basis of race, religion, color, sex, sexual orientation, disability, veteran status, national origin, age, or ancestry. In addition, we take affirmative action to recruit and assist members of various racial or ethnic groups, women, Vietnam-era veterans, and persons with disabilities whose ability to achieve academic success might otherwise be unrecognized because of cultural barriers. Our policy is fully consistent with the various federal and Ohio statutes which prohibit discrimination.

Any questions or comments about the university’s policy, and any complaint about perceived discrimination, may be directed to the director of Affirmative Action Programs, 075 Allyn Hall, (937) 775-3207.

The university’s Affirmative Action Plan is maintained in the Office of Affirmative Action Programs. Wright State is a public institution, and accessible to any member of the public.

In addition, Wright State University is a national leader in accommodating the needs of students with disabilities. Any questions or comments concerning a needed accommodation may be directed to the director of Disability Services, 133 Student Services, (937) 775-2141.

University Aim Statement

Adopted by the Board of Trustees December 3, 1996.

Wright State University will be a catalyst for educational excellence in the Miami Valley.
Mission Statement
Adopted by the Board of Trustees December 3, 1996.

Wright State University will be a catalyst for educational excellence in the Miami Valley, meeting the need for an educated citizenry dedicated to lifelong learning and service. To those ends, as a metropolitan university, Wright State will provide: access to scholarship and learning; economic and technological development; leadership in health, education and human services; cultural enhancement; and international understanding while fostering collegial involvement and responsibility for continuous improvement of education and research.

University Ethics Statement
Adopted by the WSU Board of Trustees March 28, 1997.

Wright State University’s goal of excellence and its dedication to innovation in teaching, research, and service rests upon an individual and a collective commitment to ethics. The purpose of this statement is to provide general guidelines for strengthening the integrity of the university. It sets forth basic principles for enabling the university to accomplish its mission and serves the public interest in an ethical way.

This statement also identifies a basic process for integrating these principles into the institution’s culture. The university expects the administration, the faculty, the staff, and the students to exemplify these principles in their words and actions.

To guide the conduct of the university community, Wright State University endorses the following principles:

Honesty
Members of the university community will be guided in all their activities by a high regard for truth.

Respect
Members of the university community will show concern for the individuality of others and their ideas.

Justice
Members of the university community will treat others fairly.

Accountability
Members of the university community will be responsible stewards of the public trust.

To integrate these principles into the institution’s culture and to encourage ethical conduct, Wright State University is committed to an ongoing process which will involve the creation of a standing advisory and resource committee to support ongoing formal ethics education, and to assist the university in developing ethics policies and procedures.

Diversity Statement
Wright State University celebrates diversity. Our daily life is made rich by the diversity of individuals, groups, and cultures. The interplay of the diverse stimulates creativity and achievement in all facets of our existence.

Respect, tolerance, and goodwill are the keystones to enjoying the diversity of our world. We are all linked to each other in a world created for all of us to share and enjoy. Each member of humanity has a potential contribution to make to the whole. It is our duty to encourage and promote that contribution.

Wright State University is committed to achieving an intellectual, cultural, and social environment on campus in which all are free to make their contribution. We will achieve an environment in which every student may think, and learn, and grow without prejudice, without intimidation, and without discrimination. We will achieve an environment in which personal dignity and respect for the individual are recognized by all.

Wright State University promotes the acceptance and appreciation of every individual regardless of race, gender, age, ethnicity, ability or disability, sexual orientation, socioeconomic status, religious affiliation, or national origin. We encourage appropriate activities and events that foster learning about the diversity of our world. Wright State University will be a model for our geographic region, exemplifying that a human community can exist that celebrates diversity, enjoys the richness that diversity brings to our lives, and grows stronger with every new member.
Accreditation and Memberships

Wright State is accredited by the North Central Association of Colleges and Schools. Also, programs in the College of Education and Human Services are approved by the Ohio Department of Education and accredited by the National Council for Accreditation of Teacher Education. Our music programs are accredited by the National Association of Schools of Music, business programs by AACSB — The International Association for Management Education, geological sciences by the American Institute of Professional Geologists, Professional Psychology's clinical psychology and internship programs by the American Psychological Association Committee on Accreditation, social work by the Council on Social Work Education, environmental health by the National Environmental Health and Protection Accreditation Council, medical technology by the Committee on Allied Health Education and Accreditation and the National Accrediting Agency for Clinical Laboratory Scientists, medicine by the Liaison Committee on Medical Education, the College of Engineering and Computer Science's biomedical engineering, computer engineering, electrical engineering, engineering physics, human factors engineering, materials science and engineering, and mechanical engineering programs by the Accreditation Board for Engineering and Technology, Inc., the bachelor of science program in computer science by the Computing Sciences Accreditation Board, Inc., and the College of Nursing and Health by the National League for Nursing and the Ohio Board of Nursing. In addition, the Bachelor of Science program in chemistry is certified by the American Chemical Society, and the Wright State University Lake Campus is accredited by the North Central Association of Colleges and Schools at the associate degree-granting level. Professional Accreditation Agencies (1) Council for Accreditation of Counseling and Related Educational Programs, (2) Council on Rehabilitation Education, Inc.

Wright State holds membership in numerous organizations, including the American Association of Colleges for Teacher Education, American Council of Learned Societies and National Association of State Universities and Land Grant Colleges, the Midwestern Association of Graduate Schools, the Council of Graduate Schools, the Ohio College Association, the Association of Urban Universities, the American Association of State Colleges and Universities, the American Council on Education, the American Association of Colleges, the American Association of Colleges of Nursing, the Council of Baccalaureate and Higher Degree Programs of the National League for Nursing, the American Association of Engineering Societies, the American Society for Engineering Education, and the National Society of Professional Engineers. Wright State participates in many kinds of cooperative ventures with local colleges, universities, and institutions. The College of Engineering and Computer Science participates in the Dayton Area Graduate Studies Institute (DAGSI), a unique partnership between the University of Dayton, a private institution; Wright State University, a state-supported institution; and the Air Force Institute of Technology (AFIT), a federal institution. The primary long-term goal of DAGSI is to become a world-class graduate and post-graduate research institute. Through the Southwestern Ohio Council for Higher Education, Wright State students may take courses at member institutions and also take advantage of their library facilities. The School of Medicine has cooperative arrangements with Central State and Miami Universities. Various academic centers serve both the university and the metropolitan community by providing training for students and services to the community. The Center for Labor-Management Cooperation provides outreach and in-plant support of economic development goals, retaining and expanding jobs in Ohio, and improving quality, safety, and productivity of unionized organizations. The Center for Ground Water Management provides education, research, and service activities to address problems associated with protecting ground water resources. The Women's Center provides resources and support to women from the campus community and the surrounding area. The Center for Healthy Communities is a community-academic partnership that includes WSU's Schools of Medicine and Professional Psychology, the College of Nursing and Health, and the Department of Social Work; Sinclair Community College; and the Dayton community. Its mission is to improve the health of the community, educate its health professionals, and serve as a force for change. The Center for Urban and Public Affairs (CUPA) is part of the Urban University Program, a unique network of eight urban universities funded by the Ohio Board of Regents. CUPA addresses urban problems and proposes solutions to improve Ohio's urban regions and central cities. Together and separately, the urban universities implement their mission through research, technical assistance, and service. The Statistical Consulting Center provides help free of charge to faculty, staff, and graduate students with the collection, analysis, interpretation, and management of research data and to the community-at-large for a fee. The Center for Teaching and Learning supports WSU's commitment to excellence in teaching by assisting teaching staff in teaching effectiveness and student learning. The Institute for Environmental Quality recognizes the importance of student environmental awareness at all levels, overseeing the environmental courses, programs, and research that serve our diverse student interests. In addition, the Sanders Judaic Studies Program, providing scholarship and teaching in the field of Judaic studies, is made possible through the cooperative effort of Wright State, United Theological Seminary, and the University of Dayton.
Wright State University
Report on the Quality of Teacher Preparation

Academic Year 1999–2000


Provided in compliance with the requirements of the Title II Higher Education Act.

College of Education and Human Services

Teacher Preparation: The College of Education and Human Services' teacher preparation program offers more than 50 majors in pre-K–12 education, leading to provisional licensure in Ohio. The college also offers master's programs in many areas of specialization, an Ed.S. program in school administration, a School Counseling program, and an intense, 13-month-long program for degree holders who wish to qualify for teacher licensure.

Student Characteristics: Wright State University's College of Education and Human Services has a full-time enrollment of 2,022 students, roughly divided in half between undergraduate and graduate level students. Most of our students are female, "nontraditional" age, commuter students. Twenty-one percent of all university students are minority students. The average ACT score for fall 1999 freshmen was 21.2.

Admission Requirements

Admission to Teacher Education:
Undergraduate candidates must have completed 45 quarter hours with a minimum 2.5 grade point average. They must formally apply, submit a writing sample, and be interviewed by the faculty. They must also pass a basic skills test in reading, writing, and mathematics. In addition to the formal application process described above, graduate students must have a 2.7 grade point average and have passed either the Graduate Records Exam or the Millers Analogy Test.

State Approval and Accreditation

The Teacher Preparation Program at Wright State University is approved by the Ohio Department of Education. As required by the Title II Higher Education Act, Wright State University reports that its teacher education programs are not currently designated as “low-performing” by the state (as per section 208 (a) of the HEA of 1998).

The Teacher Preparation Program at Wright State University is accredited by the National Council for Accreditation of Teacher Education (NCATE), 2101 Massachusetts Ave, NW, Suite 500, Washington, DC 20036; phone (202) 466-7496. The accreditation covers initial teacher preparation programs and advanced educator preparation programs.

Program Information

The average undergraduate GPA of a student admitted to a teacher preparation program was 3.173. The average graduate GPA of a student admitted to a teacher preparation program was 3.83. In reporting year 1999–2000, 267 students completed a teacher preparation program and took one or more of required exams. The total number of students admitted into teacher preparation programs, all specializations, in reporting year 1999–2000 was 842. The total number of students in supervised student teaching was 460. The data below is information on the number of supervising faculty: 24 were full-time faculty in professional education. Four were part-time faculty in education but full time at WSU. Sixty were part-time faculty in education and not otherwise employed at WSU. The total number of supervising faculty during 1999–2000 was 88. The student/faculty ratio in supervised student teaching was five to one. The average hours per week required in student teaching was 30. The total number of weeks required in student teaching was 11. The total number of hours required in student teaching was 330.

Special Features and Notable Accomplishments

- Wright State education graduates excel at the state and national level. In the past seven years, three Wright State graduates have been named Ohio Teacher of the Year. Wright State grads have received the 2000 Presidential Award for Excellence in Mathematics and Science Teaching; the $25,000 Milken Family Foundation National Educator Awards, which are given annually to teachers judged to be outstanding in their profession; and Disney's American Teacher Award, in recognition of their talents, skills, and commitment to their profession.
- As a leader in the education of tomorrow's teachers, Wright State is one of only three universities in the state chosen to establish the Ohio Board of Regents' new Ohio Teaching-Learning Initiative. Wright State will share its innovative teaching methods with the nearly 50 other institutions that prepare teachers in Ohio.
- Wright State is moving to meet Ohio's need for better-trained middle school and science teachers by becoming the first university in Ohio to offer a Master of Science in interdisciplinary science and math for middle school teachers. Designed for current middle school teachers, the unique program combines courses from the College of Education and Human Services and the College of Science and Mathematics.
- The College of Education and Human Services has always maintained a close working relationship with public schools and community agencies in the region. Frequent involvement of Wright State faculty in the schools and agencies of the area, and the advice and planning assistance of public school and agency personnel, help improve the college's programs, the programs of community schools, and the services of community agencies.
## HEA–Title II 1999–2000 Academic Year

**Institution Name:** Wright State University  
**Institution Code:** 1179  
**Number of Program Completers Submitted:** 274  
**State:** Ohio  
**Number of Program Completers Found, Matched, and Used in Passing Rate Calculations**: 268

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>Assessment Code Number</th>
<th>Number Taking Assessment</th>
<th>Number Passing Assessment</th>
<th>Institutional Pass Rate</th>
<th>Statewide Pass Rate</th>
<th>National Pass Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Knowledge</td>
<td>520</td>
<td>139</td>
<td>139</td>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Principles of Learning &amp; Teaching K–6</td>
<td>522</td>
<td>51</td>
<td>45</td>
<td>88%</td>
<td>89%</td>
<td>70%</td>
</tr>
<tr>
<td>Principles of Learning &amp; Teaching 5–9</td>
<td>523</td>
<td>1</td>
<td></td>
<td>80%</td>
<td></td>
<td>66%</td>
</tr>
<tr>
<td>Principles of Learning &amp; Teaching 7–12</td>
<td>524</td>
<td>68</td>
<td>65</td>
<td>96%</td>
<td>95%</td>
<td>83%</td>
</tr>
<tr>
<td>Academic Content Areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education in the Elementary School</td>
<td>010</td>
<td>85</td>
<td>85</td>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Elem Ed Curr Instruc Assessment</td>
<td>011</td>
<td>39</td>
<td>36</td>
<td>92%</td>
<td>93%</td>
<td>73%</td>
</tr>
<tr>
<td>Early Childhood Education</td>
<td>020</td>
<td>11</td>
<td>11</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Biology and General Science</td>
<td>030</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Lang Lit Comp Content Knowledge</td>
<td>041</td>
<td>14</td>
<td>11</td>
<td>79%</td>
<td>82%</td>
<td>88%</td>
</tr>
<tr>
<td>Middle School English Language Arts</td>
<td>049</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>060</td>
<td>3</td>
<td></td>
<td></td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>Mathematics: Content Knowledge</td>
<td>061</td>
<td>6</td>
<td></td>
<td></td>
<td>83%</td>
<td>53%</td>
</tr>
<tr>
<td>Chem, Physics, and General Science</td>
<td>070</td>
<td>1</td>
<td></td>
<td></td>
<td>97%</td>
<td>70%</td>
</tr>
<tr>
<td>Social Studies</td>
<td>080</td>
<td>5</td>
<td></td>
<td></td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>Social Studies: Content Knowledge</td>
<td>081</td>
<td>14</td>
<td>14</td>
<td>100%</td>
<td>92%</td>
<td>73%</td>
</tr>
<tr>
<td>Physical Education</td>
<td>090</td>
<td>4</td>
<td></td>
<td></td>
<td>97%</td>
<td></td>
</tr>
<tr>
<td>Physical Ed: Content Knowledge</td>
<td>091</td>
<td>6</td>
<td></td>
<td></td>
<td>76%</td>
<td>59%</td>
</tr>
<tr>
<td>Business Education</td>
<td>100</td>
<td>6</td>
<td></td>
<td></td>
<td>91%</td>
<td>59%</td>
</tr>
<tr>
<td>Music Content Knowledge</td>
<td>113</td>
<td>15</td>
<td>14</td>
<td>93%</td>
<td>94%</td>
<td>78%</td>
</tr>
<tr>
<td>Art Education</td>
<td>130</td>
<td>2</td>
<td></td>
<td></td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>Art Content Knowledge</td>
<td>133</td>
<td>1</td>
<td></td>
<td></td>
<td>95%</td>
<td>88%</td>
</tr>
<tr>
<td>French</td>
<td>170</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>French Productive Language Skills</td>
<td>171</td>
<td>1</td>
<td></td>
<td></td>
<td>67%</td>
<td>66%</td>
</tr>
<tr>
<td>French Content Knowledge</td>
<td>173</td>
<td>1</td>
<td></td>
<td></td>
<td>83%</td>
<td>85%</td>
</tr>
<tr>
<td>German Content Knowledge</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>73%</td>
</tr>
<tr>
<td>Subject</td>
<td>Number Taking Assessment</td>
<td>Number Completers Found</td>
<td>Matches Used</td>
<td>Passing Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------------------</td>
<td>--------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>German Productive Language Skills</td>
<td>182</td>
<td>190</td>
<td>2</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spanish</td>
<td>190</td>
<td>191</td>
<td>2</td>
<td>75%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spanish Content Knowledge</td>
<td>191</td>
<td>192</td>
<td>2</td>
<td>42%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>230</td>
<td></td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology Content Knowledge Part 1</td>
<td>231</td>
<td>231</td>
<td>10</td>
<td>80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology Content Knowledge Part 2</td>
<td>232</td>
<td>232</td>
<td>10</td>
<td>60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>240</td>
<td>241</td>
<td>1</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry Content Knowledge</td>
<td>241</td>
<td></td>
<td>2</td>
<td>85%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics Content Knowledge</td>
<td>261</td>
<td></td>
<td></td>
<td>48%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Science</td>
<td>430</td>
<td>431</td>
<td>3</td>
<td>89%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Sci Content Knowl Part 1</td>
<td>431</td>
<td></td>
<td>3</td>
<td>74%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Sci Content Knowl Part 2</td>
<td>432</td>
<td></td>
<td>3</td>
<td>70%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earth Science Content Knowledge</td>
<td>571</td>
<td></td>
<td>3</td>
<td>88%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earth Science Content Knowledge</td>
<td></td>
<td></td>
<td></td>
<td>81%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other Content Areas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Economics Education</td>
<td>120</td>
<td></td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library Media Specialist</td>
<td>310</td>
<td></td>
<td></td>
<td>88%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Education</td>
<td>550</td>
<td></td>
<td>6</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing Education</td>
<td>560</td>
<td></td>
<td>1</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Teaching Special Populations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intro to the Teaching of Reading</td>
<td>200</td>
<td></td>
<td></td>
<td>96%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ed of Students w/ Mental Retardation</td>
<td>320</td>
<td></td>
<td>5</td>
<td>96%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE Knowledge-Based Core Principles</td>
<td>351</td>
<td></td>
<td>28</td>
<td>28</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>SE Applic of Core Principles Across</td>
<td>352</td>
<td></td>
<td>28</td>
<td>28</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Tchg English as a Second Language</td>
<td>360</td>
<td></td>
<td></td>
<td>98%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tchg Students w/ Emotional Disturb</td>
<td>370</td>
<td></td>
<td></td>
<td>72%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tchg Students w/ Learning Disabil</td>
<td>380</td>
<td></td>
<td>10</td>
<td>10</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Passing Rate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 The number of program completers found, matched, and used in the passing rate calculation will not equal the sum of the column labeled “Number Taking Assessment” since a completer can take more than one assessment.

2 The national passing rate is calculated at Ohio’s cut scores, which are among the highest in the nation. For instance, Ohio requires the highest cut score in Principles of Learning and Teaching 5-9 (middle childhood) and ranks second in Principles of Learning and Teaching in K-6 and 7-12 (early childhood and adolescent/young adult).
<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>Number Taking Assessment</th>
<th>Number Passing Assessment</th>
<th>Institutional Pass Rate</th>
<th>Statewide Pass Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate—Professional Knowledge</td>
<td>260</td>
<td>251</td>
<td>97%</td>
<td>96%</td>
</tr>
<tr>
<td>Aggregate—Academic Content Areas (Math, English, Biology, etc.)</td>
<td>236</td>
<td>221</td>
<td>94%</td>
<td>94%</td>
</tr>
<tr>
<td>Aggregate—Other Content Areas (Career/Technical Education, Health Educations, etc.)</td>
<td>7</td>
<td>43</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Aggregate—Teaching Special Populations (Special Education, ELS, etc.)</td>
<td>43</td>
<td>43</td>
<td>100%</td>
<td>98%</td>
</tr>
<tr>
<td>Aggregate—Performance Assessments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Summary Totals and Pass Rates</strong>^{6}</td>
<td>268</td>
<td>249</td>
<td>93%</td>
<td>92%</td>
</tr>
</tbody>
</table>

^{1} Institutions and/or states did not require the assessments within an aggregate where data cells are blank.

^{2} Number of completers who took one or more tests in a category and within their area of specialization.

^{3} Number who passed all tests they took in a category and within their area of specialization.

^{4} Summary Totals and Pass Rate: Number of completers who successfully completed one or more tests across all categories used by the state for licensure and the total pass rate.
INDEX
Abbreviations used in course listings, 210
Academic Assistance, 44
Academic calendar, 7
Academic officers, 352
Academic programs, 14; alternative, 17
Academic: advising, 38; assistance services, 44; competitions, 28; standards and requirements, 47; standing, 51
Accountancy, 151
Accreditations, 384
Acting, 135
Activities, co-curricular, 27
Admission, advising, and registration, 31
Admission: program requirements summarized, 67
Admission standards: for the; university, 67.
See also individual colleges.
Advising: academic, 38. See also individual colleges
Affirmative action policy, 382
African and African American Studies, 107
Aim Statement, University, 382
Allied Health Programs, 169
Alternative academic programs, 17
Anatomy, 165
Anthropology. See Sociology and Anthropology
Appendix, 377
Applying for degrees, 50
Archives and Special Collections. See Dunbar Library
Areas of study, 14
Art and Art History, 107
Art Education. See Art and Art History
Asian, Hispanic, and Native American Center, 26
Associate degrees. See Lake campus, 191; technical course descriptions, 343
Athletic Training, 73, 74, 78
Athletics, 27
Auditing courses, 52
Bachelor's degrees, list of, 14; university's requirements for, 48. See also individual colleges and degree programs
Biochemistry and Molecular Biology, 166
Biological Sciences, 166
Biological Sciences Education, 172
Biomedical and Industrial and Systems Engineering, 92
Biomedical Engineering, 92
Biophysics, 185
Board of Trustees, 352
Bolinga Black Cultural Resources Center, 11, 26
Bookstore. See Student Union
Branch campus. See Wright State University—Lake Campus
Business, Raj Soin College of, 14, 147: admissions and advising, 148; degrees and areas of study, 149; departments/ major programs, 151; graduation requirements, 149; Honors Program, 150; student organizations, 150
Business Education: Integrated, 79
Business Economics, 152
Calendar, 1999-2001 academic, 7
Campus housing, 27
Campus map, inside back cover
Campus Recreation, Office of, 27
Career Services, 25
Center for Psychological Services, 25
Certificate programs, 16: CAD/CAM (at Lake Campus), 207; cartography, photogrammetry, and remote sensing, 139; desktop publishing (at Lake Campus), 207; gerontology, 131; management and advanced management certificate in (at Lake Campus), 206; microcomputer applications (at Lake Campus), 207; object-oriented programming, 97; professional writing, 116; teaching English to speakers of other languages (TESOL), 116; technical writing, 116; women's studies, 142; word processing (at Lake Campus), 207; microcomputer applications, software applications, Photoshop design and applications (at Lake Campus), 207
Certification, teaching, 36
Chemistry, 173
Choosing courses and majors, 61
Class rank, 51
Classics, 110
Co-curricular activities, 27
College study strategies, 44
College Work-Study Program, 43
Communication, 111
Index

Computer Engineering, 94
Computer resources, 22
Computer Science, 95
Consortium, 19
Cooperative Education, 19. See also individual degree programs
Counseling, academic. See academic advising
Counseling, career. See Career Services
Counseling, personal, 25
Course: audit policy, 52; descriptions, 212 (for specific page numbers, see abbreviations and page numbers for course descriptions, 210); drops, 50, 51; numbering system, 211; repeat, 52
Courses: choosing, 62; English, 63; first-year, 62; math, 63; writing intensive, 63; required to enter a major, 63
Credit by examination. See placement testing
Criteria for Ohio residency, 378
Cultural activities, 28
Dance, 133
Dean’s list, 51
Deficiency, academic, 32
Degree application deadlines. See applying for degrees
Degree-seeking students, 32
Degrees: applying for, 50; offered at university, 14; university requirements for, 48. See also individual colleges and degree programs
Design/Technology/Stage Management, 136
Developmental Education, 44
Disability Services, Office of, 24
Dismissal from university, 52
Diversity on campus, 11
Diversity Statement, 383
Dropping of courses, 50
Dual certification for vocational teachers, 87
Dual majors: Social and Industrial Communication, 129; Biological Sciences, 173; Mathematics, 183; Physics and Mathematics, 187. See also interdisciplinary study
Dunbar Library, 21
Earth Sciences/Chemistry Licensure Program (Geological Sciences Education), 178
Earth Sciences/Physics Licensure Program (Physics Education), 186
Economics (Business and Administration), 152
Economics (Liberal Arts), 112
Education and Human Services, College of, 14, 69; admissions, retention, and advising, 71; degrees and areas of study, 75; Honors Program, 77; recommendations for licensure, 77; student organizations, 78
Education Programs: Athletic Training, 73, 78, 90; Biological Sciences Education, 172; Business Education: Integrated, 79; Chemistry Education, 175; Early Childhood Education Pre-K–3 Program, 80; Earth and Space Sciences Licensure Programs (Geological Sciences Education), 178; Earth Sciences/Chemistry Licensure Programs (Geological Sciences Education), 179; Earth Sciences/Physics Licensure Program (Physics Education), 186; Geological Sciences Education, 178; Health and Physical Education Multi-Age, 82; Integrated Language Arts/English Education, 115; Integrated Mathematics Education, 182; Integrated Science Education, 180; Life Sciences/Chemistry Licensure Program (Biological Sciences Education), 172; Life Sciences/Earth Sciences Licensure Programs (Geological Sciences Education), 179; Life Sciences Licensure Program (Biological Sciences Education), 172, 173; Life Sciences/Physics Licensure Program (Physics Education), 186; Marketing Education, 83; Middle Childhood Education, 83; Music Education, 122; Organizational Leadership, 84; Physical Sciences Licensure Program (Physics Education), 186; Physics Education, 185; Social Science Education, 129; Vocational Education, 86
Electrical Engineering, 97
Employment, student, 43. See also Career Services
Engineering: Biomedical and Industrial Systems Engineering, 92; Computer Engineering, 94; Electrical Engineering, 97; Engineering Physics, 98; Mechanical and Materials Engineering, 99
Engineering and Computer Science, College of, 14, 89; admission and advising, 90; Cooperative Education, 91; degrees and areas of study, 91; Honors Program, 91; student organizations, 91
Engineering Physics, 98
English Education. See Integrated Language Arts/English Education
Environmental Sciences, 171
Equal opportunity/affirmative action policy, 382
Ethics Statement, University, 383
Exchange programs, 20
Executive Officers, 352
Exercise Science, 167

Facilities, 26
Faculty: listing, 353; officers, 375
Family Educational Rights and Privacy Act of 1974, 381
Fees: paying, 43
Finance, 153
Financial aid, 38
Financial Services, 153
Food service, 27
Fordham Health Sciences Library, 21
Foreign language requirement in Liberal Arts, 105
Foreign study programs, 20
French, 119
French Education. See Modern Languages

General education, 53: checklist, 64; Honors sections, 54; requirements, 55; substitutions, 54; Writing Across the Curriculum, 54
General Science Education. See Integrated Science Education

Geography. See Urban Affairs and Geography
Geological Sciences, 175: Environmental Geosciences, 177; Geophysics, 177
Geological Sciences Education, 178

German, 119
Good standing, 51
Government, student. See Organizations, student
Grading system, 50
Graduate Studies, School of, 16
Graduation requirements. See individual colleges
Graduation with Latin honors, 49
Grants, 42
Greek, 110

Handicapped student services. See Disability Services, Office of
Health and Physical Education Multi-Age, 82
Health services for Students, 25
High school students: college preparation for, 33; taking courses at Wright State while still in high school, 37
History Education. See Social Science Education
History, 116
Honors Program, University, 17. See also colleges and individual degree programs
Honors, graduation with Latin, 49
Housing, campus, 27
Human Factors Concentration/Experimental Psychology, 189
Human Resource Management, 157

Important phone numbers, inside front cover, 45
Industrial and Systems Engineering, 93
Insurance. See Finance and Financial Services
Integrated Language Arts/English Education, 115
Integrated Mathematics Education, 182
Integrated Science Education, 180
Interdisciplinary study, 19
International Business, 154
International Education, University Center for, 24
International students, 24, 36
International Studies, 117

Lake Campus, Wright State University, 11, 16, 191; academic programs, 194; Certificate Programs, 206; services, 192; student organizations and activities, 193; Technical Associate Degree Programs, 202
Languages. See Classics; Modern Languages
Latin, 110
Latin honors, graduating with, 49
Learning English for Academic and Professional Purposes (LEAP), 44
Legal Services for Students, 25
Liberal Arts, College of, 15, 103: admissions and advising, 104; degrees and areas of study, 105; Honors Program, 106; interdisciplinary study, 105; minors, 106; student organizations, 106; teacher licensure, 106

Libraries, University, 20

Library: Fordham Health Sciences, 21; Paul Laurence Dunbar, 21

Licensure: school nursing, 78; teaching, 36, 77; in Liberal Arts, 106; in Science and mathematics, 190. See also Education Programs and appropriate departments.

Loans, 42

Majors, 14
Management Information Systems, 157
Management, 156
Marketing, 159
Marketing Education, 83
Master’s degrees offered at university, 16
Materials Science and Engineering, 100
Mathematics and Statistics, 180; sequences, 65
Mathematics Education, 182
Mechanical and Materials Engineering, 99
Mechanical Engineering, 99
Media, student. see Organizations, student
Medicine, School of, 17
Memberships, university, 384
Middle Childhood Education, 83
Minors, 16. See also appropriate departments.
Mission statement, university, 383
Model U.N. Program, 28
Modern Languages Education. See Modern Languages
Modern Languages, 118
Motion Pictures, 133
Music, 120; extracurricular, 27; history and literature, 123; performance, 121
Music Education, 122
Musical Theatre, 135

Nondegree undergraduate students, 36
Nursing, 143
Nursing and Health, Wright State University-Miami Valley College of, 15, 143; admissions and advising, 144; degree requirements, 145; student organizations, 145

Officer training/ROTC, 20
Ohio residency, criteria for, 378
Operations Management, 158
Organizations, student, 28
Orientation, 37
Organizational Leadership, 84

Parking and Transportation, 26
Partnerships, WSU’s community, 11
Paul Laurence Dunbar Library, 21
Paying fees, 43
Performing arts. See Cultural Activities; Dance; Music; Theatre Arts
Petitions: for admission by transfer students, 33; for exceptions to scholastic regulations, 51; readmission after dismissal, 52

Philosophy, 125
Phone numbers, inside front cover, 45
Physics, 184
Physics Education, 185
Physiology/Biophysics, 187
Placement testing, 37
Policies, scholastic, 50
Political Science, 125
Premedical and preprofessional study, 18
Preprofessional programs, 18
Privacy and Release of Student Educational Record Information, 381
Probation, 51
Professional Psychology, School of, 17
Psychological Services, Center for, 25
Psychology, 187
Psychology/Sociology Education. See Social Science Education

Public Safety, 25

Quality of Teacher Preparation, Report on, 385
Quarter system. See Scholastic Policies

Radio station, student, 28
Raj Soin College of Business, 14, 147; admissions and advising, 148; degrees and areas of study, 149; departments/major programs, 151; graduation requirements, 149; Honors Program, 150; student organizations, 150

Rank, class, 51
Readmission after dismissal, 52
Registration, 43
Rehabilitation Services, 86
Religion, 127
Repeating courses, 52
Research methods requirement in Liberal Arts, 106
Residence halls. See campus housing
Residence requirements for graduation, 48
Residency, Ohio, rules governing, 378
Returning students, 36
ROTC Program, 20

Scholarships, 39
Scholastic policies, 50
School Nurse Licensure Program, 78
Science and Mathematics, College of, 15, 163;
   admissions and advising, 164; degrees and
   areas of study, 164; education programs, 190
Science Education Integrated, 180
Second degrees, 49
Security. See Public Safety
Selected Studies, 128
Social and Industrial Communication, 129
Social Science Education, 129
Social Work, 130
Sociology and Anthropology, 131
Southwestern Ohio Council for Higher Education. See consortium
Spanish, 119
Special Collections and Archives. See Dunbar Library

Sports, 27
Stage management. See theatre Arts.
Statistics. See Mathematics and Statistics
Student activities and organizations, 28
Student classification, 51
Student employment, 43
Student exchange programs, 20
Student Health Services, 25
Student Legal Services, 25
Student life, 12, 23
Student services, 24; summary of phone
   numbers, 45
Students: nondegree undergraduate, 36;
   returning, 36; high school, 32; transfer,
   33, 38
Student Union, 26
Study: abroad, 20; areas of, 14;
   interdisciplinary, 19

Teacher education. See Education and Human Services, College of
Teacher certification candidates, 36. See also
   Education and Human Services, College of
   Teacher Preparation, Report on Quality of, 385
Technical associate degree programs, 202
Technical course descriptions, 343. For specific
   page numbers, see abbreviations and page
   numbers for course descriptions, 210
TESOL: (Teaching English to Speakers of Other Languages). See English Language
   and Literatures
Testing for placement, 37
Theatre Arts, 133: Acting and Acting—Musical
   Theatre, 135; Dance, 133; Design/Technology/Stage Management, 136;
   Motion Pictures, 133; Motion Picture History, Theory, and Criticism, 134;
   Motion Picture Production, 135; Theatre Studies, 136
Transcripts: required of returning students, 36;
   required of transfer students, 33
Transfer credit, 33
Transfer module, 35
Transfer students, 33, 38
Tutoring, 44

Undecided students, 62; first-year schedule for, 66
University College. See advising, placement
   testing
University Honors Program, 17
University: description, 10; officers, 352
Urban Affairs and Geography, 137
Veterans: Affairs, Office of, 25; benefits, 43
Visual Arts Education. See Art and Art History
Vocational Education, 86

Withdrawing from university, 50
Women's Center, 26
Women's Studies, 141
Work-Study Program, 43
Wright brothers collection. See Dunbar Library
Writing Across the Curriculum, 48, 49, 51, 63;
   in General Education, 54
Writing assistance, 44
Writing Intensive (WI) courses, 43, 51, 54, 63
   See also Writing Across the Curriculum
Notes